AIWA®

S/M Code No. 84-012
DATE OF ISSUE 5/1984

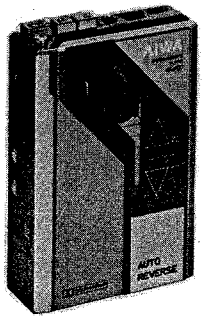
SERVICE MANUAL

TYPE. Y

STEREO CASSETTE PLAYER

MODEL NO.

HS-P07, P02 MK II

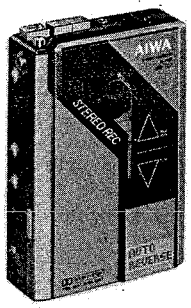


Shown above is HS-P07

STEREO CASSETTE RECORDER

MODEL NO.

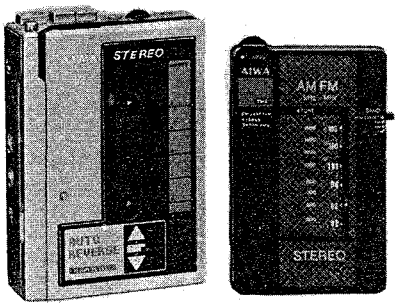
HS-F07



STEREO CASSETTE PLAYER WITH FM/AM STEREO TUNER PACK

MODEL NO.

HS-U07



SPECIFICATIONS

HS-P07,P02MKII

Power source: Batteries, DC,3V, R03 (LR03, AAA) × 2
Domestic AC power(thru optional AC adaptor)

Battery life under contiouse use:
EIAJ - 1mW output, playback mode
Approx. 3 hours (Using manganese R03 batteries-UM-4, AAA batteries or equivalent) Approx. 6 hours (Using alkaline LR03 batteries-AM-4, AAA batteries or eqivalent)

Dimensions: 80(W) × 110(H) × 23.8(D) mm (3 1/8" × 1 3/8" × 7/8")

Maximum dimensions: 81.7(W) × 113.5(H) × 24.7(D) mm (3 1/4" × 4 1/2" × 7/8")

Weight: 275g(0.60 lbs)(including batteries)

〈CASSETTE PLAYER SECTION〉

Track type: 4 tracks, 2 channels
Tape seed: 4.8 cm/s. (1 7/8 ips)
Signal to noise ratio: 50 ± 4 dB (DC/AC) P.B (Unweighted)
Frequency response: 40~12,500 Hz (NORMAL)
40~16,00 Hz (METAL)
Output power: 20 mW + 20 mW (EIAJ/DC)
Noies level: Less than 8 mV/
Less than 9 mV (DC/AC VOL MAX)
Distortion: Less than 2.5% (PB)
Motor: Core less motor
Head: Super parmalloy head (PH)
Automatic stop system: Mechanical auto, FF/REW motor stop
Automatic stop time: less than 2s.
Wow & flutter: 0.3% (WRMS)
Pinch roller pressure: 170 ± 10 g(1.67 ± 0.09N)

Take-up torque: $25\ ^{+7}_{-0}$ g-cm ($2.45\ ^{+0.69}_{-0}$ mN・m)

FF/Rewind torque: $90\ ^{+30}_{-20}$ g-cm ($8.82\ ^{+2.94}_{-1.96}$ mN・m)

Rewind/FF time: 130 ± 20s. (C-60)
Output: Head phone jack (3.5φ) × 1

〈HEADPHONE SECTION〉

Type: Dynamic type
Impedance: 29 ohms
Frequence response: 50~20.000 Hz
Sensitivity: 107 dB/mW
Maximum input: 100 mW

HS-F07

Power source: Battery DC3V, R03 (UM-4, AAA, LR-03) × 2
Domestic AC power (thru optional AC adapter)

Dimensions: 80(H) × 110(W) × 23.8(D) mm (3 1/8" × 4 3/8" × 7/8") (excluding any projecting parts)

Maximum dimensions: 83.3(H) × 114.3(W) × 24.7(D) mm (3 1/4" × 4 1/2" × 7/8")

Weight 282g (including batteries)(0.62 lbs.)

〈TAPE RECORDER SECTION〉

Track type: 4 tracks, 2 channals
Recording system: AC bias
Erasing system: MAGNET erasure
Tape speed: 4.8 cm/s (1 7/8 ips.)
Signal to noise ratio: More than 47/48 dB(PB DC/AC)
(Unweighted) More than 32/29 dB(REC/PB DC/AC)
Erasing ratio: More than 50 dB(1 kHz)
Distortion: Lass than 1%(PB)
Less than 8%(REC/PB)

Battery life:
- Using manganese batteries (R03, UM-4, AAA)
  Approx. 3 hours (EIAJ, recording mode)
  Approx. 4 hours (EIAJ, 1 mW output, playback mode)
- Using alkaline batteries (LR-03, AAA)
  Approx. 6 hours (EIAJ, recordin mode)
  Approx. 8 hours (EIAJ, 1mW output, playback mode)

Noise level: 3 ± 2mV (DC, AC, PB VOL MAX) (JIS-A)
Less than 20mV/Less than 15mV (DC/AC, REC/PB, VOL MAX)

Frequency range: 40 to 12,500 Hz (NORMAL tape)
40 to 16,000 Hz (METAL tape)
Microphone: Electret-condenser microphone (Single-point stereo, detachable)
Output power: 20 mW + 20 mW (EIAJ/DC)
Motor: Core less moter
Head Super Parmalloy head (RPH)
Automatic stop system: Mechanical auto, FF/REW motor stop
Automatic stop time: Less than 2s.(REC/PB),10 min (FF/REW)
Won & flutter: 0.3%(WRMS)
Pinch roller pressure: 170 ± 10g(1.67 ± 0.09N)

Take-up torque: $25\ ^{+7}_{-0}$ g - cm($2.45\ ^{+0.69}_{-0}$ mN・m)

FF/Rewind torque: $90\ ^{+30}_{-20}$ g - cm($8.82\ ^{+2.94}_{-1.96}$ mN・m)

FF/Rewind time: 130 ± 20s.(C-60)
Input: MIC/AUX jack 3.5φ
Max.input sensitivity: MIC-0.56 mV/1kΩ
AUX-100 mV/1kΩ
Output: Headphone jack 3.5φ stereo mini

〈HEADPHONE SECTION〉

Type: Dynamic type
Impedance: 29 ohms
Frequency response 50~20.000 Hz
Sensitivity: 107 dB/mW
Maximum input 100 mW

HS-U07

Power source:	Batteries, DC 3V,R03 (LR03, AAA) × 2 Domestic AC power(thru optional AC adaptor)
Battery life under contiouse use:	
	EIAJ - 1mW output, playback mode Approx. 3 hours (Using manganese R03 batteries-UM-4, AAA batteries or equivalent) Approx. 6 hours (Using alkaline LR03 batteries-AM-4, AAA batteries or equivalent)
	Radio reception (FM STEREO) Approx. 17 hours (Using manganese R03 batteries--UM-4, AAA batteries or equivalent) Approx. 34 hours (Using alkaline LR03 batteries-AM-4, AAA batteries or equivalent)
Dimensions:	80(W) × 110(H) × 25.2(D) mm (3 1/8" × 4 3/8" × 1")
Maximum dimensions:	81.8(W) × 113.5(H) × 25.6(D) mm (3 1/4" × 4 1/2" × 1")
Weight:	265g(0.58 lbs)(including batteries)

〈TUNER PACK SECTION〉

Circuitry:	Superheterodyne
Frequency range:	FM 10.7 MHz AM 468 kHz
Sensitivity:(THD 3%)	FM 14 ± 5 dB (at 88 MHz) 14 ± 5 dB (at 98 MHz) 20 ± 4 dB (at 108 MHz)
(S/N 3dB)	AM 39 ± 4 dB (at 600 kHz) 37 ± 4 dB (at 1,000 kHz) 35 ± 4 dB (at 1,440 kHz)
Intermediate frequency:	FM 10.7~100MHz AM 468 ± 4 kHz
Image rejection:	FM 25 ± 5 dB (at 108 MHz) AM 30 ± 5 dB (at 1,440 kHz)
IF rejection:	FM More than 60 dB (at 88 MHz) AM 40 ± 6 dB (at 600 kHz)
Separation:	27 ± 6 dB (at 98 MHz)
Antenna:	FM Head phone code antenna AM Ferrite bar antenna

〈CASSETTE PLAYER SECTION〉

Track type:	4 tracks, 2 channels
Tape speed:	4.8 cm/s
Signal to noise ratio: (Unweithted)	50 ± 4 dB (DC/AC) PB
Frequency response:	40~12,500 Hz (NORMAL) 40~16,000 Hz (METAL)
Output power:	20 mW + 20 mW (EIAJ/DC)
Noies level	Less than 8 mV/ Less than 9 mV (DC/AC VOL MAX)
Distortion:	Less than 2.5% (PB)
Motor:	Core less motor
Head:	Super parmalloy head (PH)
Automatic stop system:	Mechanical auto, FF/REW motor stop
Automatic stop time:	Less than 2s.
Wow & flutter:	0.3% (WRMS)
Pinch roller pressure:	170 ± 10g (1.67 ± 0.09N)
Take-up torque:	$25\ ^{+7}_{-0}$ g-cm ($2.45\ ^{+0.69}_{-0}$ mN • m)
FF/Rewind torque:	$90\ ^{+30}_{-20}$ g-cm ($8.82\ ^{+2.94}_{-1.96}$ mN • m)
Rewing/FF time:	130 ± 20s. (C-60)
Output:	Headphone jack (3.5φ) × 1

〈HEADPHONE SECTION〉

Type:	Dynamic type
Impedance:	29 ohms
Frequency response:	50~20.000 Hz
Sensitivity:	107 dB/mW
Maximum input:	100 mW

- Specifications and external appearance are subject to change without due to product improvement.
- Noise reduction system manufactured under license from Dolby Laboratoies Licensing Corporation.
- Dolby and the DD symbol are trademarks of Dolby Laboratories Licensing Corporation.

Follow the instructions carefully, which will allow the user to optimise the products' performance and give many years of serivce.

1. **No illegibility shall be given to the specification plate, the caution labels, the fuse labels and others.**
2. **When, on pattern sides of circuit boards, additional repair-parts have been made up, the parts shall be firmly glued to circuit boards or other components, unless the parts can be attached firmly.**
3. **The following matters shall be maintained as they are, when repairing.**
   1) Soldering of lead-wire ends
   2) Wiring and holding of lead-wires with wire-clips and binders
   3) Materials of lead-wires
   4) Location of all kinds of insulators
4. **General instructions for mechanism repair**
   1) The heads, capstan and pinch roller shall be cleaned of good quality alcohol after repaired, because dirty heads shall cause distorted sounds while dirty capstan and pinch roller shall occur wow/flutter and take-up fault.
   2) Lubricants been stained the surfaces of transmitting portion of the belts, idlers, capstan and pinch roller shall be removed, because slippery and faulty tape travel shall be caused.
   3) When oiling, only one or two drops shall be applied so as not to run over and be dispersed. Note should be taken of the metal fitting for the capstan and rotating portions of the idlers and pinch roller, especially.
   4) E-rings and poly slider washers shall be replaced with new ones, if once those have been removed. – No re-utilization due to unreliability.
   5) Regular spare-parts shall always be used for repair, because using irregular parts and tampering with the products shall cause deterioration, mulfunction and damage.

DISASSEMBLY INSTRUCTIONS

1. Removing Rear Panel

1) Open the battery lid.
2) Remove the 6 screws and detach the rear panel in the direction of the arrow. (See Figure-1)

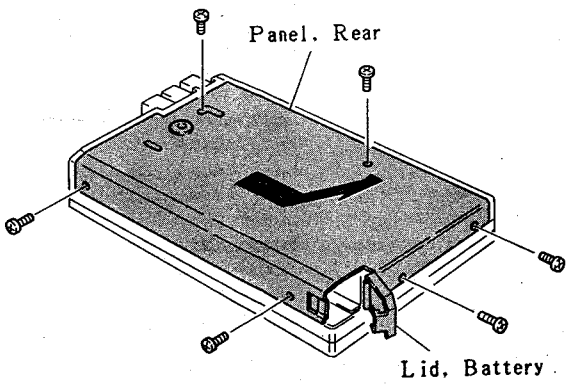


Fig. 1

2. Removing Main C.B

1) Remove the 2 screws and pull out the cassette lid in the direction of the arrow. (See Figure-2)

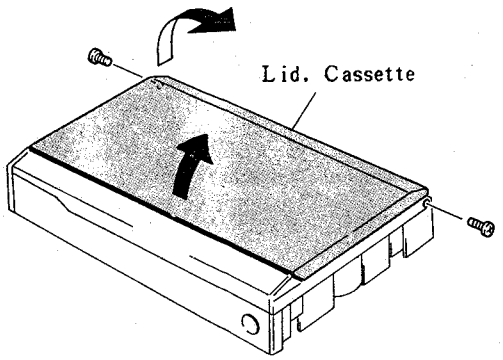


Fig. 2

2) Remove the 4 screws and detach the control panel, the top panel and the cassette frame in order. (See Figure-3)

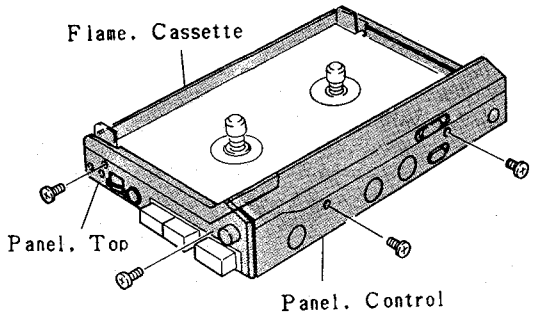


Fig. 3

3) Remove the 6 screws and raise the circuit board in the direction of the arrow. (See Figure-4)

Caution) Take note to raise the main circuit board because the governor circuit board may be caught by the motor housing.

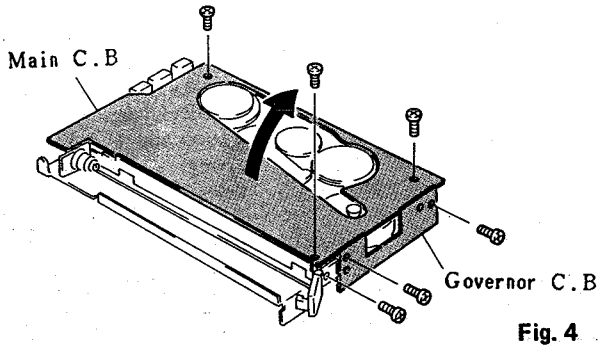


Fig. 4

3. Replacing Motor

1) Remove the 5 screws. (See Figure-5)

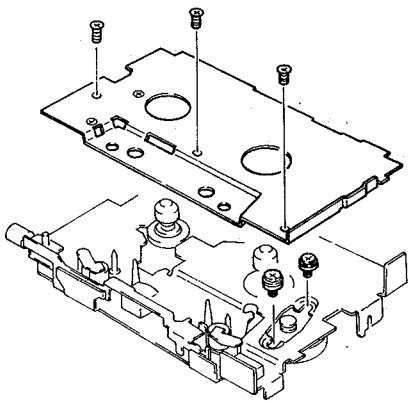


Fig. 5

2) Remove the 2 screws and desolder the 3 spots. Then, loosen the 2 screws on the main circuit board, and detach the governor circuit board and motor. (See Figure-6)

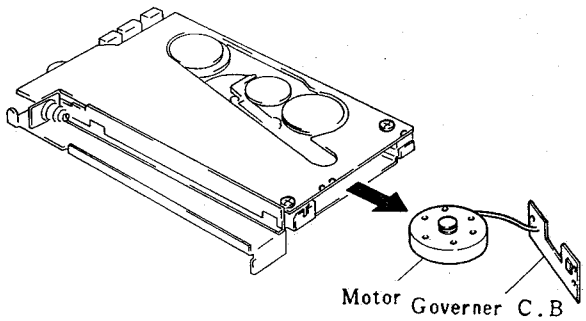
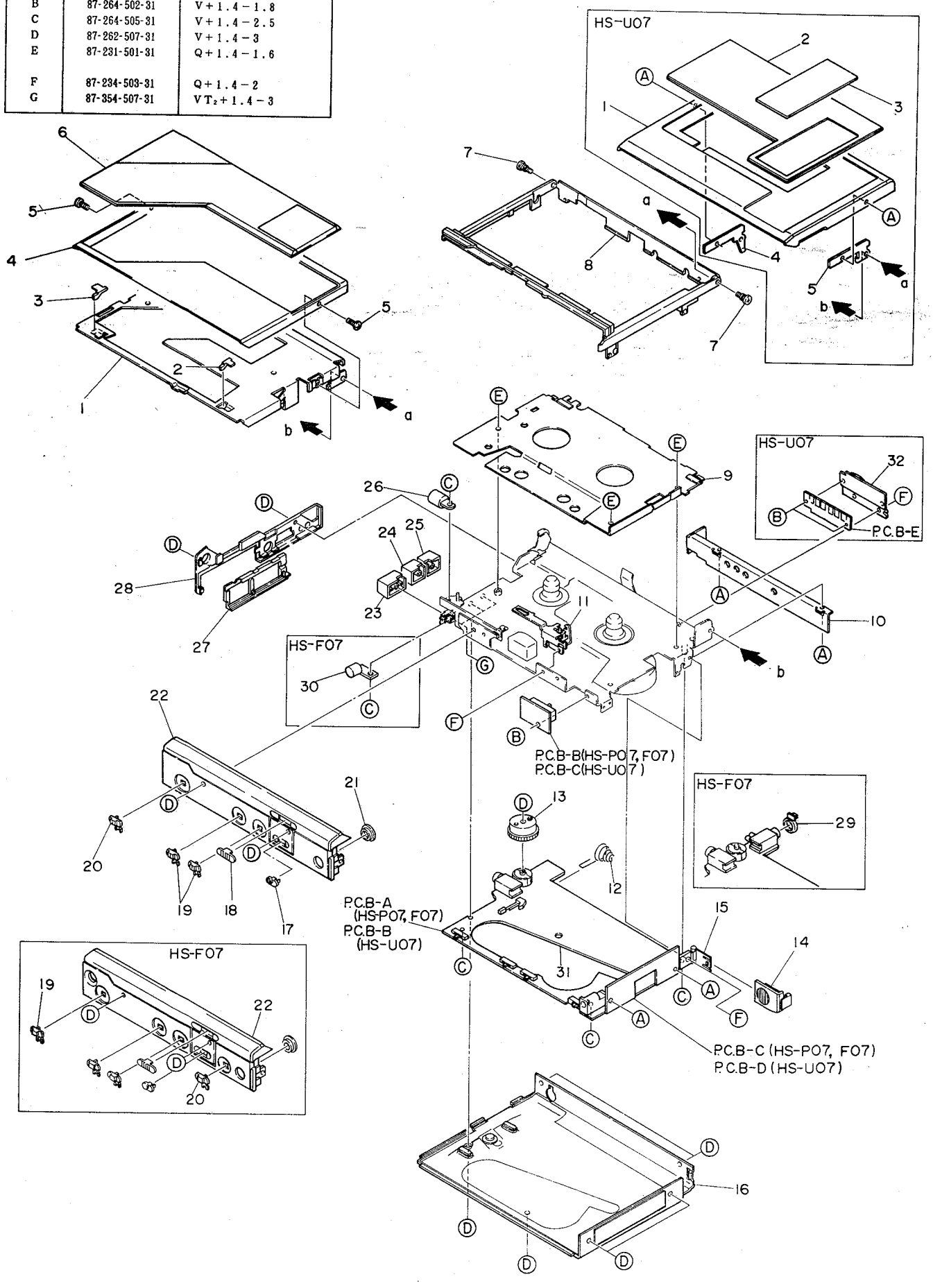


Fig. 6

☆ **MEMO** ☆

EXPLODED VIEW-I (HS-P07,P02MKII·F07·U07)

Ref. No.	Part No.	Description
A	87-263-500-31	V+1.4−1.4
B	87-264-502-31	V+1.4−1.8
C	87-264-505-31	V+1.4−2.5
D	87-262-507-31	V+1.4−3
E	87-231-501-31	Q+1.4−1.6
F	87-234-503-31	Q+1.4−2
G	87-354-507-31	VT₂+1.4−3



MECHANICAL PARTS LIST (HS-P07,P02MKII)

■※mark in this part list shows exclusive part.
■ "★★★" shows unavailable Repair Part.
■ [S]=SILVER [R]=RED [BL]BLUE [B]=BLACK [YL]=YELLOW

Part No. Changed to	Ref. No.	Part No.	Description	Common Model	Q'ty	Remark
	1-1 ~ 6	09-027-227	CASSETTE BOX Ass'y (S)	※	1	
		09-027-228	CASSETTE BOX Ass'y (R)	※	1	
		09-027-229	CASSETTE BOX Ass'y (BL)	※	1	
		09-027-258	CASSETTE BOX Ass'y (B)	※	1	
		09-027-241	CASSETTE BOX Ass'y (YL)	※	1	
	1-1	82-679-203	HOLDER, CASSETTE	※	1	★★★
	1-2	82-679-228	GUIDE L, CASSETTE	※	1	★★★
	1-3	82-679-229	GUIDE R, CASSETTE	※	1	★★★
	1-4	82-679-006	PANEL, CASSETTE (S)	※	1	★★★
		82-679-034	PANEL R, CASSETTE (R)	※	1	★★★
		82-679-038	PANEL DBL, CASSETTE (BL)	※	1	★★★
		82-679-035	PANEL B, CASSETTE (B)	※	1	★★★
		82-679-044	PANEL PY, CASSETTE (YL)	※	1	★★★
	1-5	87-263-502	V+1.4-1.8		2	
	1-6	82-679-057	WINDOW, CASSETTE	※	1	★★★
	1-7	82-679-215	HINGE SCREW+14	※	2	
	1-8	82-679-014	FLAME, CASSETTE	※	1	
	1-9	82-679-016	PLATE, CASSETTE	※	1	★★★
	1-10	82-679-219	HOLDER, BATTERY	※	1	
	1-11	82-679-202	LEVER LOCK Ass'y	※	1	
	1-12	82-679-220	SPRING, BATTERY	※	1	
	1-13	82-679-030	KNOB, VOLUME	※	1	
	1-14	82-679-015	LID, BATTERY	※	1	
	1-15	82-673-257	BATTERY TERMINAL Ass'y	HS-P06	1	
	1-16	82-679-002	REAR PANEL Ass'y (S, B)	※	1	
		82-679-051	REAR PANEL Ass'y (R)	※	1	
		82-679-055	REAR PANEL Ass'y (BL)	※	1	
		82-679-056	REAR PANEL Ass'y (YL)	※	1	
	1-17	82-679-023	KNOB, SLIDE CH	※	1	
	1-18	82-679-024	KNOB, SLIDE LOCK	※	1	
	1-19	82-679-026	KNOB, SLIDE	※	2	
	1-20	82-679-022	SLIDE KNOB, PAUSE	※	1	
	1-21	82-670-023	SPACER, JACK	HS-P05	1	★★★
	1-22	82-679-011	PANEL, CONTROL	※	1	
	1-23	82-679-017	PUSH-BUTTON, PLAY	※	1	
	1-24	82-679-018	PUSH-BUTTON, FF	※	1	
	1-25	82-679-019	PUSH-BUTTON, REW	※	1	
	1-26	82-679-021	PUSH-BUTTON, STOP	※	1	
	1-27	82-679-013	BUTTON FLAME (S)	※	1	
		82-679-033	BUTTON FLAME W (R, BL, B, YL)	※	1	
	1-28	82-679-012	PANEL, TOP	HS-P07	1	

(HS-F07)

■ [S]=SILVER [R]=RED [T]=GOLD

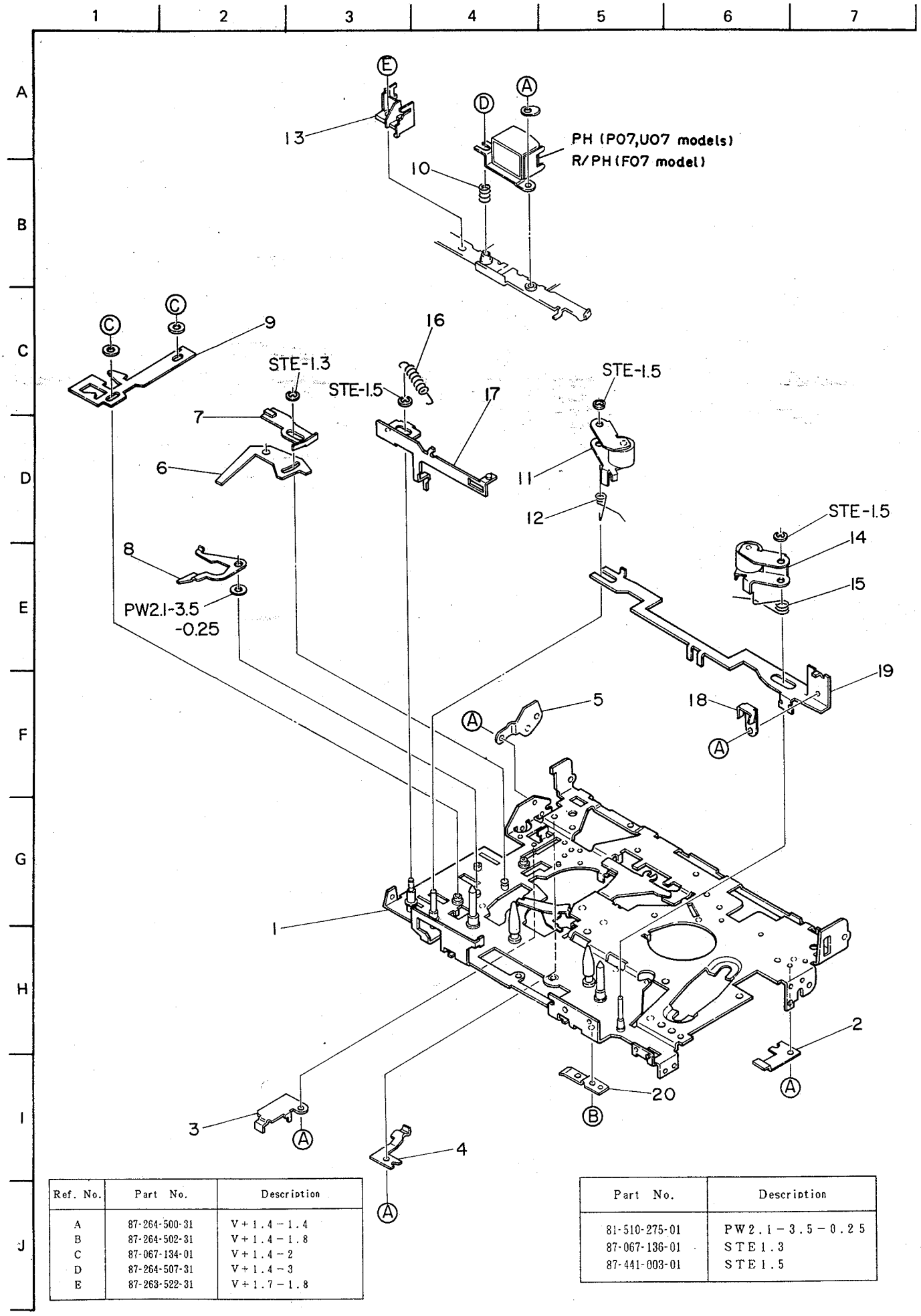
Part No. Changed to	Ref. No.	Part No.	Description	Common Model	Q'ty	Remark
	1-1 ~ 6	09-027-247	CASSETTE BOX Ass'y (S)	※	1	
		09-027-258	CASSETTE BOX Ass'y (B)	※	1	
		09-027-260	CASSETTE BOX Ass'y (T)	※	1	
	1-1	82-679-203	HOLDER, CASSETTE	HS-P07	1	★★★
	1-2	82-679-228	GUIDE L, CASSETTE	HS-P07	1	★★★
	1-3	82-679-229	GUIDE R, CASSETTE	HS-P07	1	★★★
	1-4	82-680-003	PANEL, CASSETTE (S, T)	※	1	★★★
		82-680-025	PANEL, CASSETTE (B)	※	1	★★★
	1-5	87-263-502	V+1.4-1.8 (S, T)		2	
		87-261-502	V+1.4-1.8 (B)		2	
	1-6	82-680-028	WINDOW, CASSETTE	※	1	★★★
	1-7	82-679-215	HINGE SCREW +1 4	HS-P07	2	
	1-8	82-679-014	FLAME, CASSETTE	HS-P07	1	
	1-9	82-680-012	PLATE, CASSETTE	※	1	★★★
	1-10	82-679-219	HOLDER, BATTERY	HS-P07	1	
	1-11	82-679-202	LEVER LOCK Ass'y	HS-P07	1	
	1-12	82-679-220	SPRING, BATTERY	HS-P07	1	
	1-13	82-679-030	KNOB, VOLUME	HS-P07	1	
	1-14	82-679-015	LID, BATTERY	HS-P07	1	
	1-15	82-673-257	BATTERY TERMINAL Ass'y	HS-P06	1	
	1-16	82-680-002	REAR PANEL Ass'y (S)	※	1	
		82-680-023	REAR PANEL Ass'y (B)	※	1	
		82-680-032	REAR PANEL Ass'y (T)	※	1	
	1-17	82-679-023	KNOB, SLIDE CH	HS-P07	1	
	1-18	82-679-024	KNOB, SLIDE LOCK	HS-P07	1	
	1-19	82-679-026	KNOB, SLIDE	HS-P07	3	
	1-20	82-679-022	SLIDE KNOB, PAUSE	HS-P07	1	
	1-21	82-670-023	SPACER, JACK	HS-P05	1	★★★
	1-22	82-680-008	PANEL, CONTROL	※	1	
	1-23	82-679-017	PUSH-BUTTON, PLAY	HS-P07	1	
	1-24	82-679-018	PUSH-BUTTON, FF	HS-P07	1	
	1-25	82-679-019	PUSH-BUTTON, REW	HS-P07	1	
	1-26	82-679-021	PUSH-BUTTON, STOP	HS-P07	1	
	1-27	82-679-013	BUTTON FLAME (S)	HS-P07	1	
		82-679-033	BUTTON FLAME W (B, T)	HS-P07	1	
	1-28	82-679-012	PANEL, TOP	HS-P07	1	
	1-29	82-680-203	RUBBER RING, MIC	※	1	★★★
	1-30	82-680-010	PUSH-BUTTON, REC	※	1	

(HS-U07)

■[S]=SILVER [R]=RED [BL]=BLUE [B]=BLACK [YL]=YELLOW

Part No. Changed to	Ref. No.	Part No.	Description	Common Model	Q'ty	Remark
	1-1 ~ 2	09-027-245	CASSETTE BOX Ass'y (S)	※	1	
		09-027-246	CASSETTE BOX Ass'y (R)	※	1	
		09-027-247	CASSETTE BOX Ass'y (BL)	※	1	
		09-027-259	CASSETTE BOX Ass'y (B)	※	1	
		09-027-248	CASSETTE BOX Ass'y (YL)	※	1	
	1-1	82-682-001	CASSETTE LID Ass'y (S)	※	1	★★★
		82-682-021	CASSETTE LID Ass'y (R)	※	1	★★★
		82-682-022	CASSETTE LID Ass'y (BL)	※	1	★★★
		82-682-026	CASSETTE LID Ass'y (B)	※	1	★★★
		82-682-023	CASSETTE LID Ass'y (YL)	※	1	★★★
	1-2	82-682-005	WINDOW Y, CASSETTE	※	1	★★★
	1-3	82-682-004	DECORATIVE, CASSETTE	※	1	★★★
	1-4	82-682-201	HOLDER A	※	1	★★★
	1-5	82-682-202	HOLDER B	※	1	★★★
	1-7	82-679-215	HINGE SCREW +1.4	HS-P07	2	
	1-8	82-682-006	FLAME, CASSETTE	※	1	
	1-9	82-679-016	PLATE, CASSETTE	HS-P07	1	★★★
	1-10	82-679-219	HOLDER, BATTERY	HS-P07	1	
	1-11	82-679-202	LEVER LOCK Ass'y	HS-P07	1	
	1-12	82-679-220	SPRING, BATTERY	HS-P07	1	
	1-13	82-679-030	KNOB, VOLUME	HS-P07	1	
	1-14	82-679-015	LID, BATTERY	HS-P07	1	
	1-15	82-673-257	BATTERY TERMINAL Ass'y	HS-P06	1	
	1-16	82-682-008	REAR PANEL Ass'y (S)	※	1	
		82-682-033	REAR PANEL Ass'y (R)	※	1	
		82-682-034	REAR PANEL Ass'y (BL)	※	1	
		82-682-038	REAR PANEL Ass'y (B)	※	1	
		82-682-035	REAR PANEL Ass'y (YL)	※	1	
	1-17	82-679-023	KNOB, SLIDE CH	HS-P07	1	
	1-18	82-679-024	KNOB, SLIDE LOCK	HS-P07	1	
	1-19	82-679-026	KNOB, SLIDE	HS-P07	2	
	1-20	82-682-012	SLIDE KNOB, FUNCTION	※	1	
	1-21	82-670-023	SPACER, JACK	HS-P05	1	★★★
	1-22	82-682-011	PANEL, CONTROL	※	1	
	1-23	82-679-017	PUSH-BUTTON, PLAY	HS-P07	1	
	1-24	82-679-018	PUSH-BUTTON, FF	HS-P07	1	
	1-25	82-679-019	PUSH-BUTTON, REW	HS-P07	1	
	1-26	82-679-021	PUSH-BUTTON, STOP	HS-P07	1	
	1-27	82-679-013	BUTTON, FLAME (S)	HS-P07	1	
		82-679-033	BUTTON FLAME W (R, BL, R, YL)	HS-P07	1	
	1-28	82-679-012	PANEL, TOP	HS-P07	1	
	1-31	82-679-233	G CUSHION 5×5	HS-P07	1	
	1-32	82-682-205	HOLDER CIRCUIT BOARD Ass'y	※	1	

EXPLODED VIEW-2 (HS-P07,P02MKII·F07·U07)



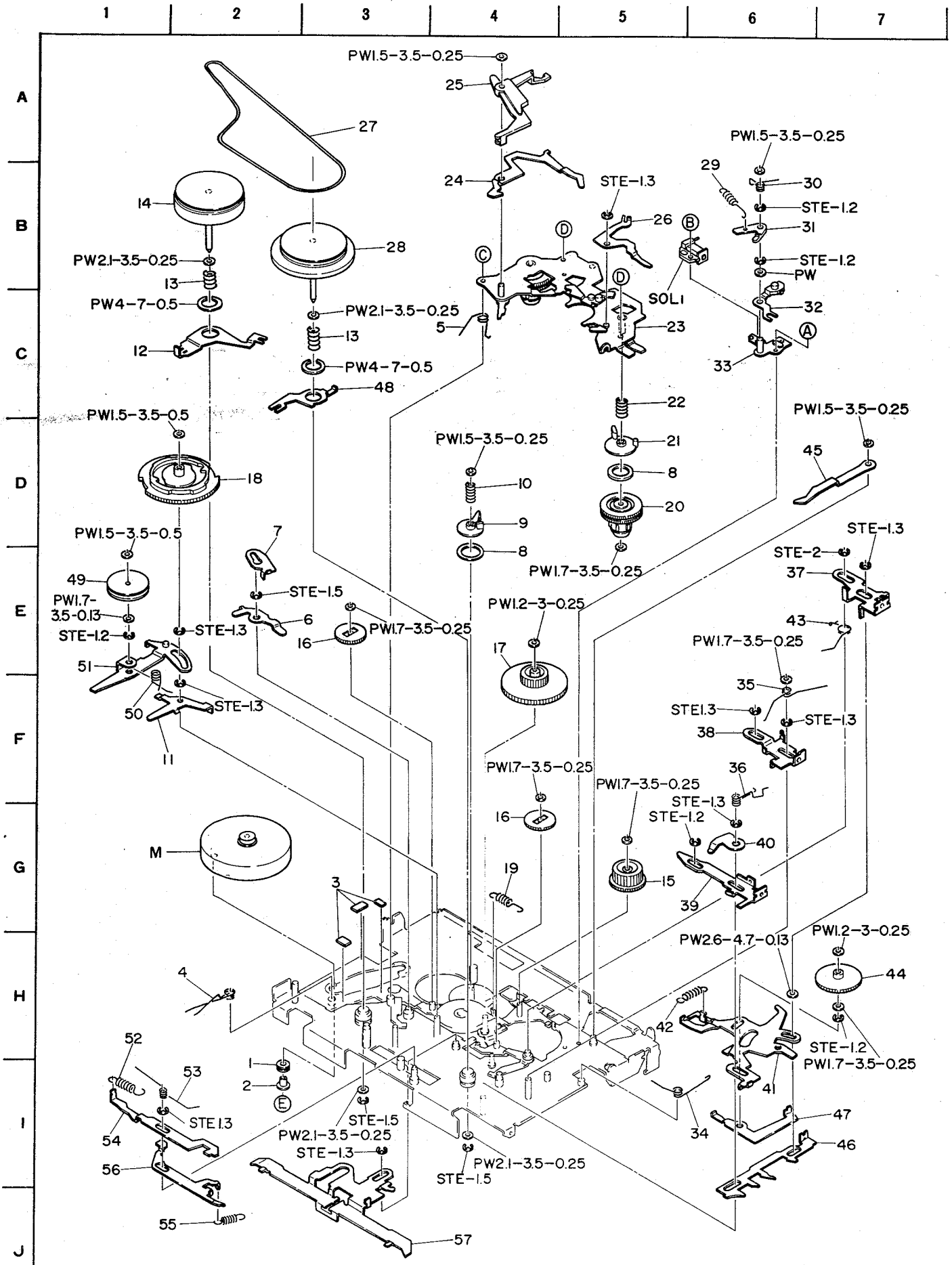
Ref. No.	Part No.	Description
A	87-264-500-31	V+1.4-1.4
B	87-264-502-31	V+1.4-1.8
C	87-067-134-01	V+1.4-2
D	87-264-507-31	V+1.4-3
E	87-263-522-31	V+1.7-1.8

Part No.	Description
81-510-275-01	PW2.1-3.5-0.25
87-067-136-01	STE1.3
87-441-003-01	STE1.5

Part No. Changed to	Ref. No.	Part No.	Description	Common Model	Q'ty	Remark
	2-1	86-511-411	MECHANISM SHASSIS SEMI Ass'yP		1	★★★
	2-2	82-679-210	P-SPRING, CASSETTE	※	1	★★★
	2-3	82-679-222	HOLDER, HP JACK	※	1	★★★
	2-4	82-679-211	P-SPRING, CLIK	※	1	★★★
	2-5	86-679-231	JOINT PLATE Ass'y	※	1	★★★
	2-6	86-511-276	RINK FF		1	★★★
	2-7	86-511-277	P-SPRING, REW LEVER		1	★★★
	2-8	86-511-334	ARM MS EJECT		1	★★★
	2-9	86-511-335	LOCK PLATE		1	★★★
	2-10	82-654-320	C-SPRING, AZIMUTH		1	
	2-11	86-511-254	PINCH LEVER L Ass'y		1	
	2-12	86-511-257	T-SPRING, PINCH LEVER L		1	
	2-13	86-511-348	TAPE GUIDE		1	★★★
	2-14	86-511-252	PINCH LEVER R Ass'y		1	
	2-15	86-511-256	T-SPRING, PINCH LEVER R		1	
	2-16	86-511-302	E-SPRING, STOP LEVER		1	
	2-17	86-511-443	STOP LEVER Ass'y		1	★★★
	2-18	86-511-280	P-SPRING, SELECTOR SWITCH		1	★★★
	2-19	86-511-278	SELECTOR LEVER Ass'y		1	★★★
	2-20	86-511-309	P-SPRING, CLIK		1	★★★

- **This mechanism list shows 3 models commonly — HS-P07, F07 and U07, because these models adopt the common mechanism. Refer to the EXPLODED VIEW-4 as to the REC mechanism parts of HS-F07.**
- **As to 'the cautions when repairing the mechanism' and 'the function explanation', refer to the service manual for HS-J07.**

EXPLODED VIEW-3 (HS-P07,P02MKII·F07·U07)



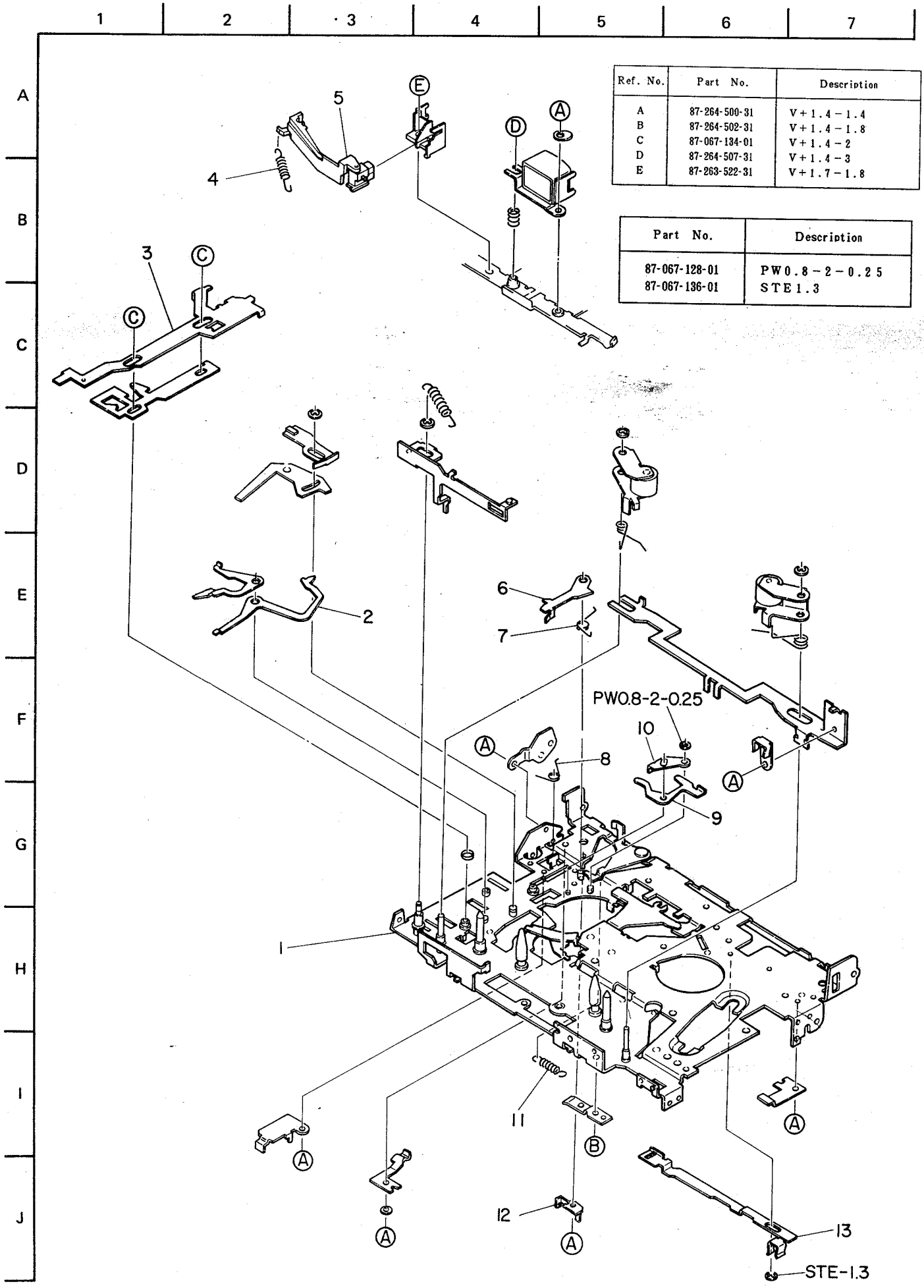
Ref. No.	Part No.	Description
A	87-263-502-31	V+1.4-1.8
B	87-264-503-31	V+1.4-2
C	87-263-505-31	V+1.4-2.5
D	87-233-505-31	Q+1.4-2.5
E	87-233-525-31	Q+1.7-3.5

Part No.	Description
87-081-945-01	PW1.2-3-0.25
87-067-137-01	PW1.5-3.5-0.25
87-067-135-01	PW1.7-3.5-0.13
87-067-051-01	PW1.7-3.5-0.25
87-067-155-01	PW2.6-4.7-0.13

Part No.	Description
87-067-139-01	PW4-7-0.5
87-441-001-01	STE1.2
87-067-136-01	STE1.3
87-441-003-01	STE1.5

Part No. Changed to	Ref. No.	Part No.	Description	Common Model	Q'ty	Remark
	3-1	86-511-445	G CUSHION, MOTOR		2	★★★
	3-2	86-511-441	COLLAR, MOTOR		2	★★★
	3-3	86-511-379	STOPPER, MOTOR		3	★★★
	3-4	86-511-259	T-SPRING, TURN OVER		1	
	3-5	86-511-369	T-SPRING, GEAR TAKE-UP T		1	
	3-6	86-511-238	RINK, TAKE-UP T		1	★★★
	3-7	86-511-310	PLATE, AUTO SELECT		1	★★★
	3-8	86-511-305	SRIP FELT, AUTO R		2	
	3-9	86-511-306	ARM AUTO R		1	
	3-10	86-511-307	C-SPRING, ATUO R		1	
	3-11	86-511-206	RINK, TAKE-UP S		1	★★★
	3-12	86-511-308	SELECT LEVER		1	★★★
	3-13	86-511-440	C-SPRING, FLYWHEEL		2	
	3-14	86-511-287	FLYWHEEL R Ass'y		1	
	3-15	86-511-229	GEAR, FF, REW		1	
	3-16	86-511-232	GEAR, TAKE-UP		2	
	3-17	86-511-297	GEAR, MAIN		1	
	3-18	86-511-293	SELECT CAM		1	
	3-19	86-511-371	E-SPRING, FF, REW		1	
	3-20	86-511-353	SUPPLY REEL Ass'y		1	
	3-21	86-511-351	ARM, AUTO L		1	
	3-22	86-511-352	C-SPRING AUTO C		1	
	3-23	86-511-311	BOTTOM PLATE CHASSIS Ass'y		1	
	3-24	86-511-358	ARM TIMING		1	★★★
	3-25	86-511-357	LOCK ARM		1	★★★
	3-26	86-511-351	ARM, MAIN SWITCH		1	★★★
	3-27	86-511-298	BELT, MAIN		1	
	3-28	86-511-290	FLYWHEEL L Ass'y		1	
	3-29	86-511-333	E-SPRING, AUTO HIGH SPEED		1	
	3-30	86-511-386	T-SPRING, MS LOCK		1	
	3-31	86-511-332	ARM, HIGH SPEED		1	
	3-32	86-511-328	RINK MS Ass'y		1	★★★
	3-33	86-511-325	PLUNGER HOLDER SEMI Ass'y		1	★★★
	3-34	86-511-281	T-SPRING, LOCK PLATE		1	
	3-35	86-511-269	T-SPRING, PLAY, REW		1	
	3-36	86-511-271	T-SPRING, LOCK PLATE		1	
	3-37	86-511-270	LEVER, REW		1	★★★
	3-38	86-511-447	LEVER, FF		1	★★★
	3-39	86-511-262	LEVER, PLAY		1	★★★
	3-40	86-511-404	PLATE, LOCK PS		1	★★★
	3-41	86-511-263	RINK, ACTUATING CHASSIS		1	★★★
	3-42	86-511-250	E-SPRING, CUE, REV		1	
	3-43	86-511-370	T-SPRING, GEAR TAKE-UP S		1	
	3-44	86-511-286	GEAR A		1	
	3-45	86-511-274	ARM B, CUE, REV		1	★★★
	3-46	86-511-261	LOCK PLATE BUTTON		1	★★★
	3-47	86-511-273	ARM A, CUE, REV		1	★★★
	3-48	86-511-285	ARM, SELECTOR S		1	★★★
	3-49	86-511-295	PULLEY, MAIN		1	
	3-50	86-511-249	T-SPRING, ACTUATING CHASSIS		1	
	3-51	86-511-282	ARM SELECTOR Ass'y		1	★★★
	3-52	86-511-267	E-SPRING		1	
	3-53	86-511-372	T-SPRING, LOCK ARM		1	
	3-54	86-511-265	ARM		1	★★★
	3-55	86-511-266	E-SPRING, CHANNEL		1	
	3-56	86-511-264	LEVER, CHANNEL		1	★★★
	3-57	86-511-245	ACTUATING CHASSIS Ass'y		1	★★★

EXPLODED VIEW-4 (HS-F07)



Ref. No.	Part No.	Description
A	87-264-500-31	V+1.4−1.4
B	87-264-502-31	V+1.4−1.8
C	87-067-134-01	V+1.4−2
D	87-264-507-31	V+1.4−3
E	87-263-522-31	V+1.7−1.8

Part No.	Description
87-067-128-01	PW0.8−2−0.25
87-067-136-01	STE1.3

Part No. Changed to	Ref. No.	Part No.	Description	Common Model	Q'ty	Remark
	4-1	86-511-450	MECHANISM CHASSIS S Ass'y-F		1	★★★
	4-2	86-511-362	ARM, REC EJECT		1	★★★
	4-3	86-511-359	LEVER, REC		1	★★★
	4-4	86-511-367	E-SPRING, RINK EH		1	
	4-5	86-511-365	RINK EH		1	
	4-6	86-511-361	LOCK PLATE, REC		1	★★★
	4-7	86-511-387	T-SPRING, REC LOCK		1	
	4-8	86-511-360	T-SPRING, REC LEVER		1	
	4-9	86-511-373	RINK, REC		1	★★★
	4-10	86-511-377	ARM, REC LOCK TIMING		1	★★★
	4-11	86-511-363	E-SPRING, REC BLOCKING		1	
	4-12	86-679-221	HOLDER, MIC JACK	HS-P07	1	★★★
	4-13	86-511-408	ARM REC Ass'y		1	★★★

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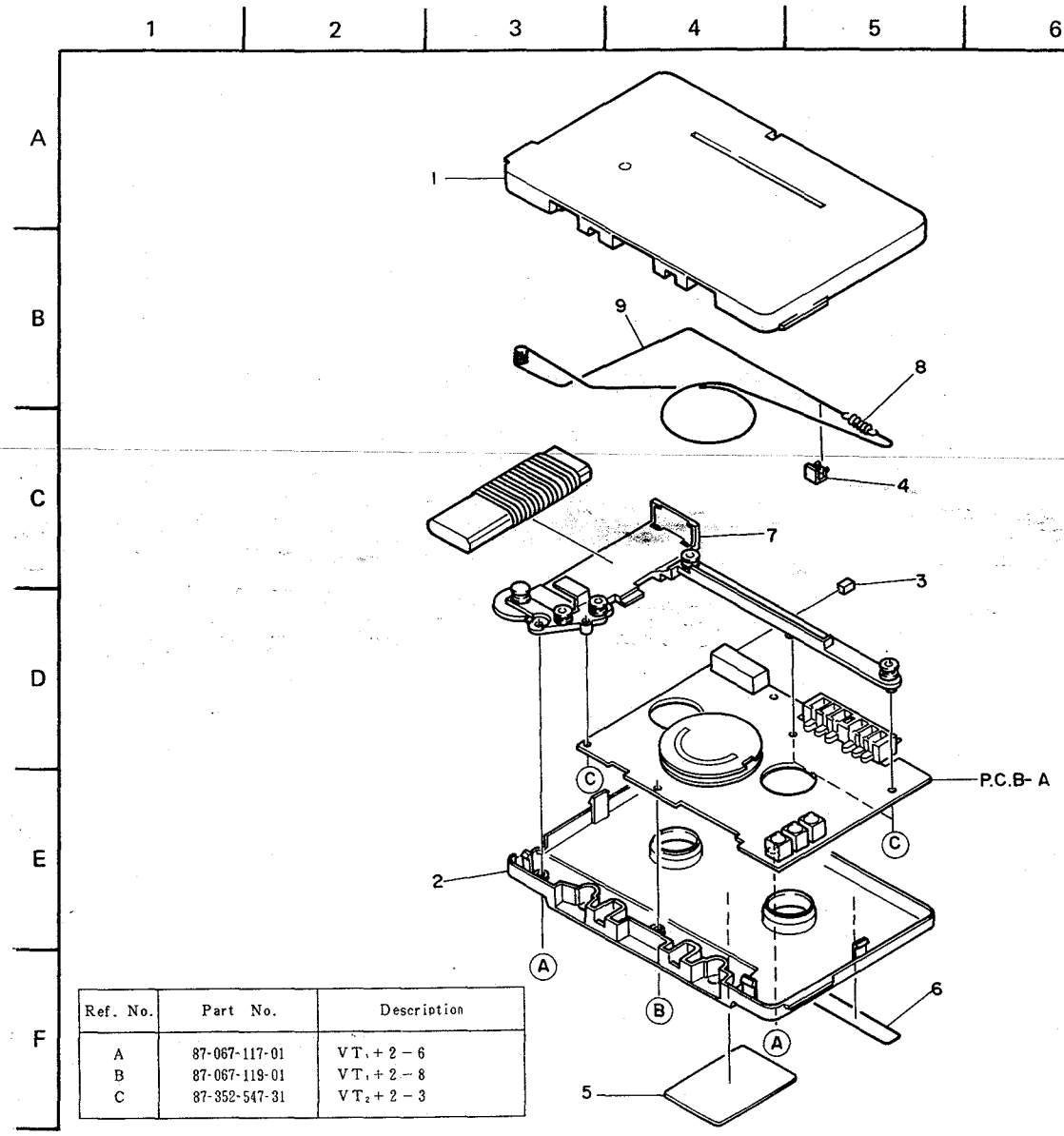
EXPLODED VIEW-5 (TU-02)

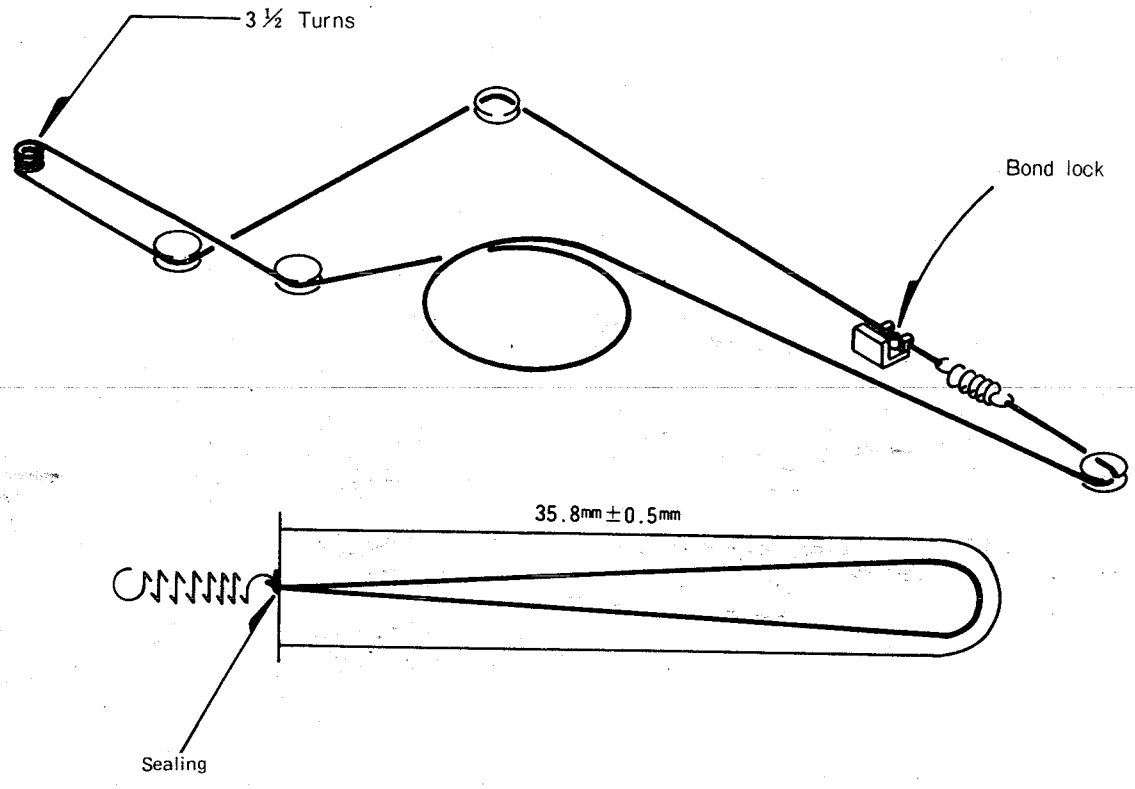


Ref. No.	Part No.	Description
A	87-067-117-01	VT₁+2-6
B	87-067-119-01	VT₁+2-8
C	87-352-547-31	VT₂+2-3

TUNER PACK (TU-02)

Part No. Changed to	Ref. No.	Part No.	Description	Common Model	Q'ty	Remark
	1	81-193-004	CABINET A Y	TU-01	1	
	2	81-193-002	CABINET B	TU-01	1	
	3	81-193-007	KNOB, BAND SELECTOR	TU-01	1	
	4	81-193-004	POINTER, TUNING	TU-01	1	★★★
	5	81-194-003	LABEL, Spec. Y	※	1	★★★
	6	81-193-010	LABEL, CAUTION	TU-01	1	★★★
	7	81-193-201	RADIO CHASSIS Ass'y	TU-01	1	★★★
	8	81-193-204	E-SPRING, DIAL	TU-01	1	
	9	87-096-095	STRING, DIAL 0.2 φ		1	

DIAL CORD STRINGING



■ACCESSORIES/PACKAGE LIST

HS-P07,P02MKII

Part No. Changed to	Ref. No.	Part No.	Description	Common Model	Q'ty	Remark
	1	82-679-859	PRINTED INDIV., PACKING Y (Y, YR, YB, YBL, YYL only)	※	1	★★★
	2	82-679-866	PRINTED INDIV, PACKING (P02MKII) (YU, YUR only)	※	1	★★★
	3	82-679-904	INSTRUCTIONS BOOKLET Y (Y, YR, YB, YBL, YYL only)	※	1	★★★
	4	82-679-905	INSTRUCTIONS BOOKLET (P02MKII) (YU, YUR only)	※	1	★★★
	5	82-659-957	SHOULDER BELT		1	★★★
	6	82-679-951	CARRYING CASE (Y, YBL, YYL, YU only)	※	1	★★★
	7	82-679-953	CARRYING CASE R (YR, YUR only)	※	1	★★★
	8	82-679-959	CARRYING CASE B (YB only)	※	1	★★★
	9	86-369-810	HP-M15N (BLACK)		1	★★★
		86-369-014	EAR PAD		2	★★★
	10	87-080-017	BELT HANGER B Ass'y		12	★★★

HS-F07

Part No. Changed to	Ref. No.	Part No.	Description	Common Model	Q'ty	Remark
	1	82-680-856	PRINTED INDIV., PACKING	※	1	★★★
	2	82-659-957	SHOULDOR BELT		1	★★★
	3	82-680-951	MIC (1 POINT MIC)	※	1	★★★
	4	82-680-953	CARRYING CASE (Y, YT only)	※	1	★★★
	5	82-680-955	CARRYING CASE B (YB, YUB only)	※	1	★★★
	6	86-369-810	HP-M15N (BLACK)		1	★★★
		86-369-014	EAR PAD		2	★★★
	7	87-080-020	BELT HANGER B Ass'y GY		1	★★★

HS-U07

Part No. Changed to	Ref. No.	Part No.	Description	Common Model	Q'ty	Remark
	1	82-682-857	PRINTED INDIV., PACKING Y	※	1	★★★
	2	82-682-904	INSTRUCTIONS BOOKLET	※	1	★★★
	3	82-682-953	CARRYING CASE R (YR only)	※	1	★★★
	4	82-682-954	CARRYING CASE B (YB, YZB only)	※	1	★★★
	5	82-682-952	CARRYING CASE S (Y, YBL, YYL, YU, YZ, only)	※	1	★★★
	6	82-682-955	TUNER PACK TU-02	※	1	★★★
	7	82-659-957	SHOULDOR BELT		1	★★★
	8	87-080-020	BELT HANGER B Ass'y		1	★★★
	9	86-369-810	HP-M15N (BLACK)		1	★★★
		86-369-014	EAR PAD		2	★★★

840525(1)-Z

AIWA Co., Ltd. Tokyo Japan

Printed in Japan

TO USE this pattern view, put the (+) mark upon the one of the writing view.

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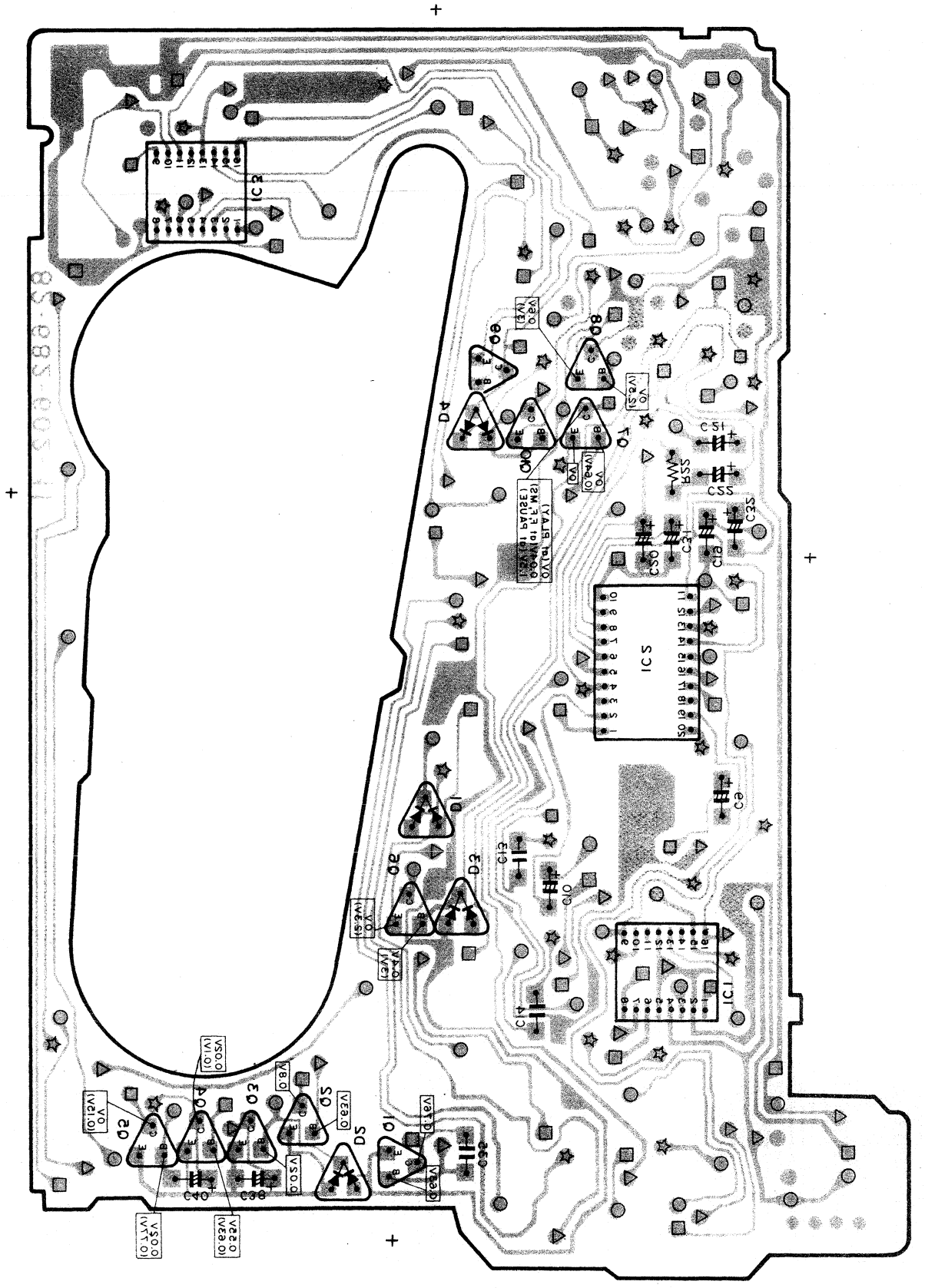

TO USE this pattern view, put the (+) mark upon the one of the wiring view.

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TO USE this pattern view, put the (+) mark upon the one of the writing view.

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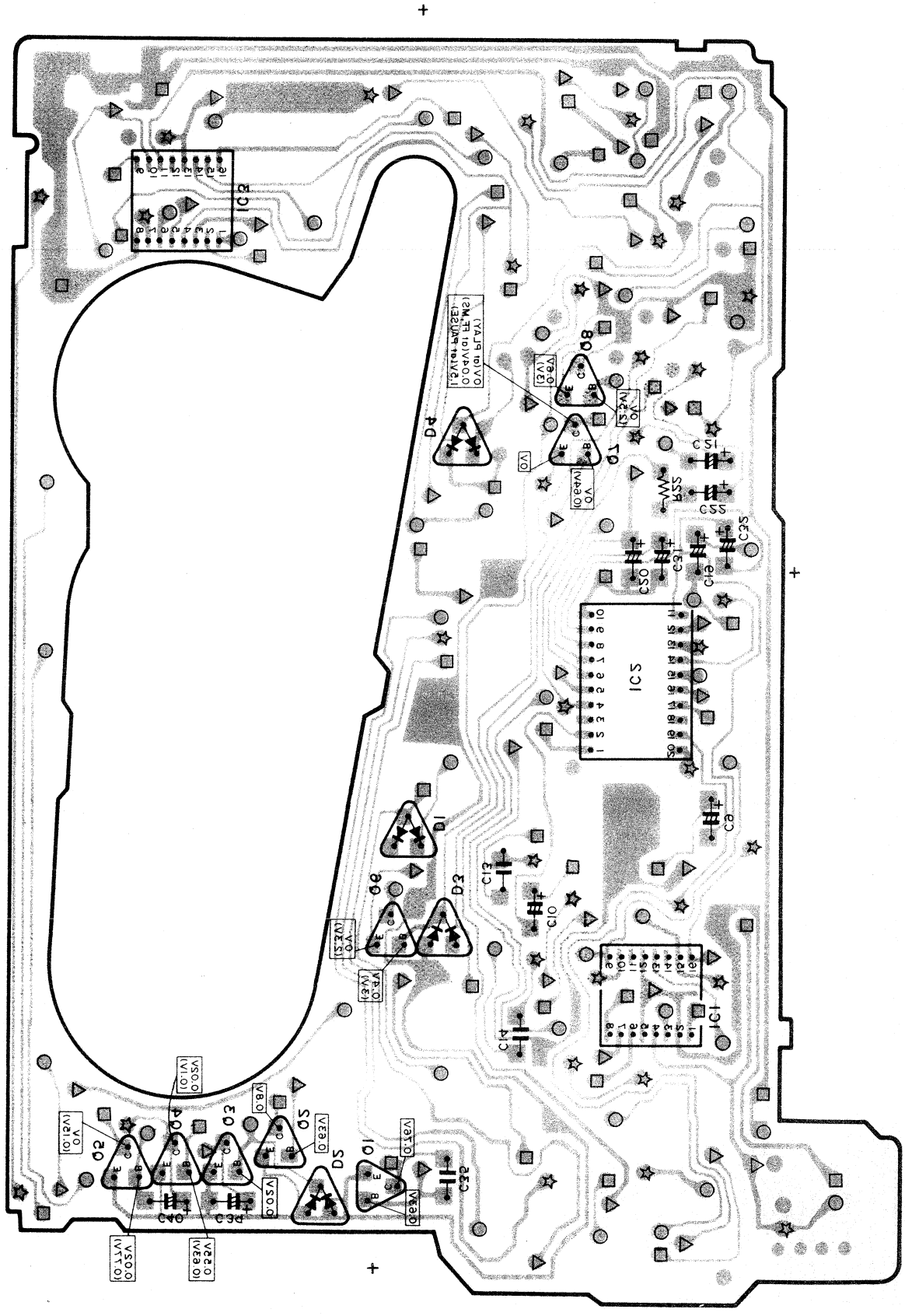

TO USE this pattern view, put the (+) mark upon the one of the wiring view.

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TO USE this pattern view, put the (+) mark upon the one of the wiring view.

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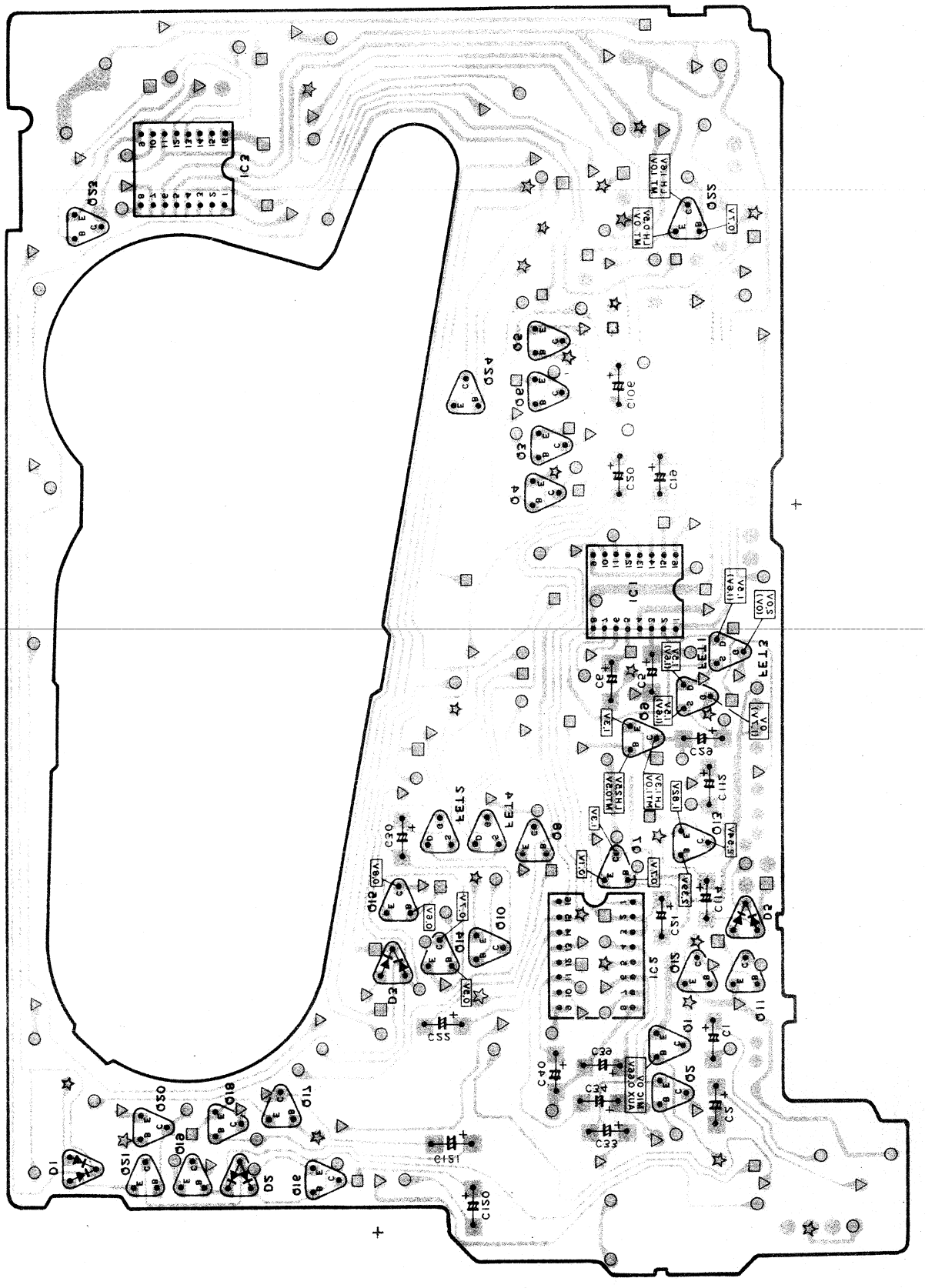

TO USE this pattern view, put the (+) mark upon the one of the wiring view.

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ELECTRICAL MAIN PARTS LIST
(HS-P07, HS-P02MK II)

Symbol No.	Part No.	Description	Remark
		<MAIN CIRCUIT BOARD SECTION>	
PCB-A	*	MAIN CIRCUIT BOARD	
IC1	87-020-235	IC. TA7709F(S)	
IC2	87-020-231	IC. TK10640F	
IC3	87-020-234	IC. TA7688F(S)	
Q1,7	89-327-125	CHIP TRANSISTOR. 2SC2712(GR)	
Q2,3,4,6	89-327-124	CHIP TRANSISTOR. 2SC2712(Y)	
Q5	89-333-265	CHIP TRANSISTOR. 2SC3326A	
Q8	89-111-624	CHIP TRANSISTOR. 2SA1162(Y)	
D1,4	87-020-125	CHIP DIODE. 1SS181	
D2,3	87-020-027	CHIP DIODE. 1SS184	
D5,6	87-020-015	LED. TLR102A(DIRECTION-FWD, REV)	
L1,2	87-003-040	CHOKE COIL. 47μH	
SFR1,2	87-021-883	SEMI-FIXED RESISTOR. 500Ω-B	
VR1,2	87-021-885	VOLUME. 20kΩ-A(VOLUME)	
J1	87-049-411	JACK. 3.5ø(PHONES)	
J2	87-049-431	DC JACK	
S2,3,4	87-031-816	SLIDE SWITCH(TAPE SELECTOR, DOLBY NR, PAUSE)	
S5,6	87-031-830	LEAF SWITCH(PLAY, FF/REW)	
		<RESISTOR>	
R25,26	87-022-033	430kΩ CHIP TRANSISTOR	
		<CAPACITORS>	
C1,2	87-010-176	680pF CHIP CAPACITOR	
C3,4,43,46	87-010-114	47μF 4V ELECTROLYTIC	
C5,6	87-010-220	0.018μF CHIP CAPACITOR	
C7,8	87-010-213	0.015μF CHIP CAPACITOR	
C9,10,32	87-015-933	1μF 10V CHIP TANTALUM	
C11,12	87-010-186	4700pF CHIP CAPACITOR	
C13,14	87-015-834	0.033μF CHIP CAPACITOR	
C15,16,42	87-010-197	0.01μF CHIP CAPACITOR	
C17,18,23,24,25,26,34	87-010-196	0.1μF CHIP CAPACITOR	
C19,20	87-015-923	0.22μF 35V CHIP TANTALUM	
C21,22,31,39,40	87-015-934	2.2μF 4V CHIP TANTALUM	
C27,28,29,45	87-010-082	220μF 4V ELECTROLYTIC	
C30,47	87-010-115	100μF 4V ELECTROLYTIC	
C33	87-010-076	22μF 6.3V ELECTROLYTIC	
C35	87-015-768	220pF CHIP CAPACITOR	
C36	87-010-195	0.068μF CHIP CAPACITOR	
C37	87-010-194	0.047μF CHIP CAPACITOR	
C38,41	87-015-843	10μF 6.3V TANTALUM	
C44	87-010-075	10μF 16V ELECTROLYTIC	
C53	87-015-440	4.7μF 3.15V TANTALUM	

Symbol No.	Part No.	Description	Remark
		<SWITCH CIRCUIT BOARD SECTION>	
PCB-B	*	SWITCH CIRCUIT BOARD	
S1	87-031-829	SLIDE SWITCH(REVERSE MODE)	
		<MOTOR CIRCUIT BOARD SECTION>	
M	82-680-607 (82-679-604)	MOTOR(W/PCB-C)	
		<MISCELLANEOUS>	
PH	82-679-605	PB HEAD	
SOL1	87-045-226	SOLENOID	

Note; Combination Circuit Board

The parts on the electrical parts list which are indicated by an asterisk (*) are supplied as one single combined circuit board. Therefore, they will not be supplied separately. If this becomes necessary, please order the entire circuit board.

Combination circuit board 82-679-603

PCB-A 82-679-601
PCB-B 82-679-602

ELECTRICAL MAIN PARTS LIST
(HS-F07)

Symbol No.	Part No.	Description	Remark
		<MAIN CIRCUIT BOARD SECTION>	
PCB-A	*	MAIN CIRCUIT BOARD	
IC1	87-020-230	IC. TA7739F	
IC2	87-020-224	IC. NJM2063A	
IC3	87-020-234	IC. TA7688F(S)	
Q1,2,5,6,7,8,11,12,18	89-333-266	CHIP TRANSISTOR. 2SC3326B	
Q3,4,9,10,21,23	89-108-126	CHIP TRANSISTOR. 2SA812M6	
Q13,14,15,16,17,19,20,24	89-316-236	CHIP TRANSISTOR. 2SC1623L6	
Q22	89-413-284	CHIP TRANSISTOR. 2SD1328T	
FET1,2,3,4	89-502-094	CHIP FET. 2SK209Y	
D1,3,5	87-020-027	CHIP DIODE. 1SS184	
D2	87-020-125	CHIP DIODE. 1SS181	
D4,6,7	87-020-012	DIODE. OA90A-R	
D8,9	87-020-015	LED. TLR102A(DIRECTION-FWD. REV)	
L3	87-007-145	BIAS OSC COIL	
J1	87-049-411	JACK. 3.5ø(PHONES)	
J2	87-049-419	JACK. 3.5ø(AUX/MIC)	
J3	87-049-431	DC JACK(DC3V)	
VR1,2	87-021-885	VOLUME. 20kΩ-A(VOLUME)	
S2	82-680-605	SLIDE SWITCH(REC/PLAY)	
S3,4,5,6	87-031-845	SLIDE SWITCH(AUX/MIC. TAPE SELECTOR. DOLBY NR. PAUSE)	
S7,8	87-031-830	LEAF SWITCH(PLAY. FF/REW)	
SFR1,2	87-021-884	SEMI-FIXED RESISTOR 300Ω-B	
		<RESISTOR>	
R59,60	87-022-033	430kΩ CHIP RESISTOR	
		<CAPACITORS>	
C1,2	87-015-923	0.22μF 35V CHIP TANTALUM	
C3,4,25,26,27,28,108,113	87-010-182	2200pF CHIP CAPACITOR	
C5,6,19,20,21,22,112,114	87-015-933	1μF 10V CHIP TANTALUM	
C7,8,117	87-010-176	680pF CHIP CAPACITOR	
C9,10,43,44	87-010-178	1000pF CHIP CAPACITOR	
C13,14,101,111,125	87-010-114	47μF 4V ELECTROLYTIC	
C15,16	87-010-192	0.022μF CHIP CAPACITOR	
C17,18,45,46,110,116,131	87-010-196	0.1μF CHIP CAPACITOR	
C29,30	87-015-932	0.47μF 20V CHIP TANTALUM	
C33,34,106,120,121	87-015-934	2.2μF 4V CHIP TANTALUM	
C31,32	87-010-188	6800pF CHIP CAPACITOR	
C35,36	87-010-193	0.033μF CHIP CAPACITOR	
C37,38,119	87-010-194	0.047μF CHIP CAPACITOR	

HS-FU7 YUB · HS-U07 YU,YZ,YZB HS-FU7 YUB · HS-U07 YU,YZ,YZB

ELECTRICAL MAIN PARTS LIST
(HS-U07)

"★★★" shows unavailable Repair Part.

Symbol No.	Part No.	Description	Remark
C39.40	87-010-214	0.68μF 16V CHIP TANTALUM	
C41.42	87-010-186	4700pF CHIP CAPACITOR	
C47.48.102. 124.126. 127	87-010-082	220μF 4V ELECTROLYTIC	
C104	87-010-218	22μF 4V TANTALUM	
C103.123. 130	87-015-969	10μF 6.3V ELECTROLYTIC	
C106.121	87-015-375	2.2μF TANTALUM	
C107.109	87-010-190	0.01μF CHIP CAPACITOR	
C115	87-015-968	4.7μF 16V ELECTROLYTIC	
C118	87-010-195	0.068μF CHIP CAPACITOR	
C128	87-015-440	4.7μF 3.15V TANTALUM	
C129	87-015-986	10μF 6.3V TANTALUM	
＜F/R CIRCUIT BOARD SECTION＞			
PCB-B	*	F/R CIRCUIT BOARD	
S1	87-031-829	SLIDE SWITCH(REVERSE MODE)	
＜MOTOR CIRCUIT BOARD SECTION＞			
PCB-C	*	MOTOR CIRCUIT BOARD	
M	82-680-607	MOTOR	
＜MISCELLANEOUS＞			
RPH	82-680-604	REC/PB HEAD	
EH	87-046-241	ERASE HEAD	
SOL1	87-045-226	SOLENOID	

Note; Combination Circuit Board

The parts on the electrical parts list which are indicated by an asterisk (*) are supplied as one single combined circuit board. Therefore, they will not be supplied separately. If this becomes necessary, please order the entire circuit board.

Combination circuit board 82-679-603

PCB-A 82-680-601
PCB-B 82-680-602

Symbol No.	Part No.	Description	Remark
＜TU-02 CIRCUIT BOARD SECTION＞			
PCB-A	*	TU-02 CIRCUIT BOARD	
IC1	87-020-143	IC, TA7358F	
IC2	87-020-228	IC, TA7757F	
IC3	87-020-167	IC, TA7342F	
Q1	89-327-143	CHIP TRANSISTOR, 2SC2714(O)	
Q2	89-501-602	CHIP FET, 2SK160(K5)	
Q3.4	89-327-125	CHIP TRANSISTOR, 2SC2712(GR)	
D1	87-017-004	VARIABLE CAPACITOR DIODE, SD117	
LED1	87-027-262	LED, TLR-124(TUNING)	
L1	87-003-092	CHOKE COIL	
L2	87-006-069	FM RF COIL	
L3	87-007-142	FM OSC COIL	
L4	81-194-601	AM BAR ANTENNA COIL	
L5	87-007-130	AM OSC COIL	
L6	87-003-089	CHOKE COIL, 47μH	
S7	87-031-847	SLIDE SWITCH (BAND SELECTOR)	
VC1.2.3.4	87-011-157	PVC, 20P	
IFT1	87-008-278	FM IFT	
IFT2	87-008-285	AM IFT	
IFT3	87-008-269	FM QUAD COIL	
IFT4	87-008-268	AM IFT(DET)	
CF1.2	87-008-229	FM CERAMIC FILTER, 10.7 MA5U(Y, YU only)	
CF1.2	87-008-277	FM CERAMIC FILTER, 10.7 MS2U(YZ only)	
CF3	87-008-284	CERAMIC FILTER, PFB 468J	
BPF1	87-030-092	BAND PASS FILTER	
TC1.2.3	87-011-154	CERAMIC TRIMMER, 6pF	
TC4	87-011-155	CERAMIC TRIMMER, 10pF	
SFR1	87-021-677	SEMI-FIXED RESISTOR, 10kΩ-B	
	81-193-603	CONNECTOR, 6P	
＜CAPACITORS＞			
C1	87-015-763	82pF CHIP CAPACITOR	
C2.42	87-010-108	20pF CHIP CAPACITOR	
C3	87-015-746	5pF CHIP CAPACITOR	
C4.24	87-015-835	0.047μF CHIP CAPACITOR	
C5.7.10.11. 12.13.14. 16.21.27. 41	87-015-819	0.01μF CHIP CAPACITOR	
C6	87-015-818	4700pF CHIP CAPACITOR	
C8	87-010-093	15pF CHIP CAPACITOR	
C9	87-010-092	3pF CHIP CAPACITOR	
C15	87-015-768	220pF CHIP CAPACITOR	
C17.40	87-010-082	220μF 4V ELECTROLYTIC	
C18	87-015-627	10000μF CHIP CAPACITOR	
C19.20.22	87-015-883	0.022μF CHIP CAPACITOR	
C23	87-010-117	6pF CHIP CAPACITOR	
C25	87-010-072	2.2μF 50V ELECTROLYTIC	
C26	87-010-076	22μF 6.3V ELECTROLYTIC	
C28	87-015-965	1μF 50V ELECTROLYTIC	
C29	87-015-968	4.7μF 16V ELECTROLYTIC	
C30	87-015-785	0.1μF CHIP CAPACITOR	
C31.39	87-010-071	1μF 50V ELECTROLYTIC	
C32	87-010-073	3.3μF 50V ELECTROLYTIC	
C33	87-010-074	4.7μF 35V ELECTROLYTIC	
C34	87-014-057	10000pF PP	
C35.36	87-015-882	0.012μF CHIP CAPACITOR (Y, YZ only)	
C35.36	87-015-823	0.018μF CHIP CAPACITOR (YU only)	
C37	87-015-964	0.47μF 50V ELECTROLYTIC	
C38	87-010-070	0.47μF 50V ELECTROLYTIC	
C43	87-010-116	12pF CHIP CAPACITOR	
＜MAIN CIRCUIT BOARD SECTION＞			
PCB-B	*	MAIN CIRCUIT BOARD	
IC1	87-020-235	IC, TA7709F(S)	
IC2	87-020-231	IC, TK10640F	
IC3	87-020-234	IC, TA7688F(S)	
Q1.7	89-327-125	CHIP TRANSISTOR, 2SC2712(GR)	
Q2.3.4.6	89-327-124	CHIP TRANSISTOR, 2SC2712(Y)	
Q5	89-333-266	CHIP TRANSISTOR, 2SC3326B	
Q8	89-111-624	CHIP TRANSISTOR, 2SA1162(Y)	
Q9.10	89-113-625	CHIP TRANSISTOR, 2SA1362(GR)	
D1.2.3	87-020-027	CHIP DIODE, 1SS184	
D4	87-020-125	CHIP DIODE, 1SS181	
D5.6	87-020-015	LED, TLR102A(DIRECTION-FWD, REV)	
L1.2	87-003-089	CHOKE COIL, 47μH	
L3.4	87-003-097	COIL, 1μH	
L5	87-003-098	COIL, 2.2μH	
L6	87-003-040	CHOKE COIL, 47μH	
SFR1.2	87-021-883	SEMI-FIXED RESISTOR, 500Ω-B	
★★★ VR1.2	87-021-885	VOLUME, 20kΩ-A(VOLUME)	
J1	87-049-411	JACK, 3.5ø(PHONES)	
J2	87-049-431	DC JACK	
S2.3.4	87-031-816	SLIDE SWITCH(TAPE SELECTOR, DOLBY NR, POWER)	
S5	87-031-830	LEAF SWITCH(PLAY)	
S6	82-679-610	LEAF SWITCH(F.F/REW)	
＜RESISTOR＞			
R25.26	87-022-033	430kΩ CHIP RESISTOR	
＜CAPACITORS＞			
C1.2	87-010-176	680pF CHIP CAPACITOR	
C3.4.43.46	87-010-114	47μF 4V ELECTROLYTIC	
C5.6	87-010-220	0.018μF CHIP CAPACITOR	
C7.8	87-010-213	0.015μF CHIP CAPACITOR	
C9.10.32	87-015-933	1μF 10V TANTALUM	
C11.12	87-010-186	4700pF CHIP CAPACITOR	
C13.14	87-015-834	0.033μF CHIP CAPACITOR	
C15.16.42	87-010-197	0.01μF CHIP CAPACITOR	
C17.18.23. 24.25.26. 34	87-010-196	0.1μF CHIP CAPACITOR	

Symbol No.	Part No.	Description	Remark
C19,20	87-015-923	0.22μF 35V CHIP TANTALUM	
C21,22,31, 38,40	87-015-934	2.2μF 4V CHIP TANTALUM	
C27,28,30 45,48,49	87-010-082	220μF 4V ELECTROLYTIC	
C29	87-010-076	22μF 6.3V ELECTROLYTIC	
C33,41	87-015-986	10μF 6.3V TANTALUM	
C35	87-015-768	220pF CHIP CAPACITOR	
C36	87-010-195	0.068μF CHIP CAPACITOR	
C37	87-010-194	0.047μF CHIP CAPACITOR	
C44	87-010-075	10μF 16V ELECTROLYTIC	
C47	87-010-115	100μF 4V TANTALUM	
C50	87-015-440	4.7μF 3.15V TANTALUM	
C52	87-010-158	22pF CHIP CAPACITOR	
C53,54	87-010-169	180pF CHIP CAPACITOR	
<SWITCH CIRCUIT BOARD SECTION>			
PCB-C	*	SWITCH CIRCUIT BOARD	
S1	87-031-829	SLIDE SWITCH(REVERSE MODE)	
<MOTOR CIRCUIT BOARD SECTION>			
M	82-679-604	MOTOR(W/PCB-D)	
<RELAY CIRCUIT BOARD SECTION>			
PCB-E	82-682-606	PCB CONNECTOR B	
<MISCELLANEOUS>			
PH	82-679-605	PB HEAD	
SOL1	87-045-226	SOLENOID	

Note; Combination Circuit Board

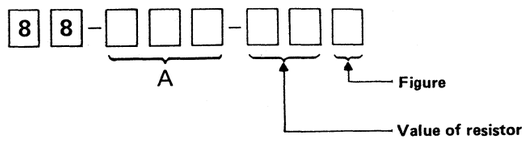
The parts on the electrical parts list which are indicated by an asterisk (*) are supplied as one single combined circuit board. Therefore, they will not be supplied separately. If this becomes necessary, please order the entire circuit board.

Combination circuit board 82-682-604

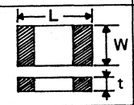
PCB-B 82-682-602

PCB-C 82-682-603

Chip resistor parts cord



Chip resistor

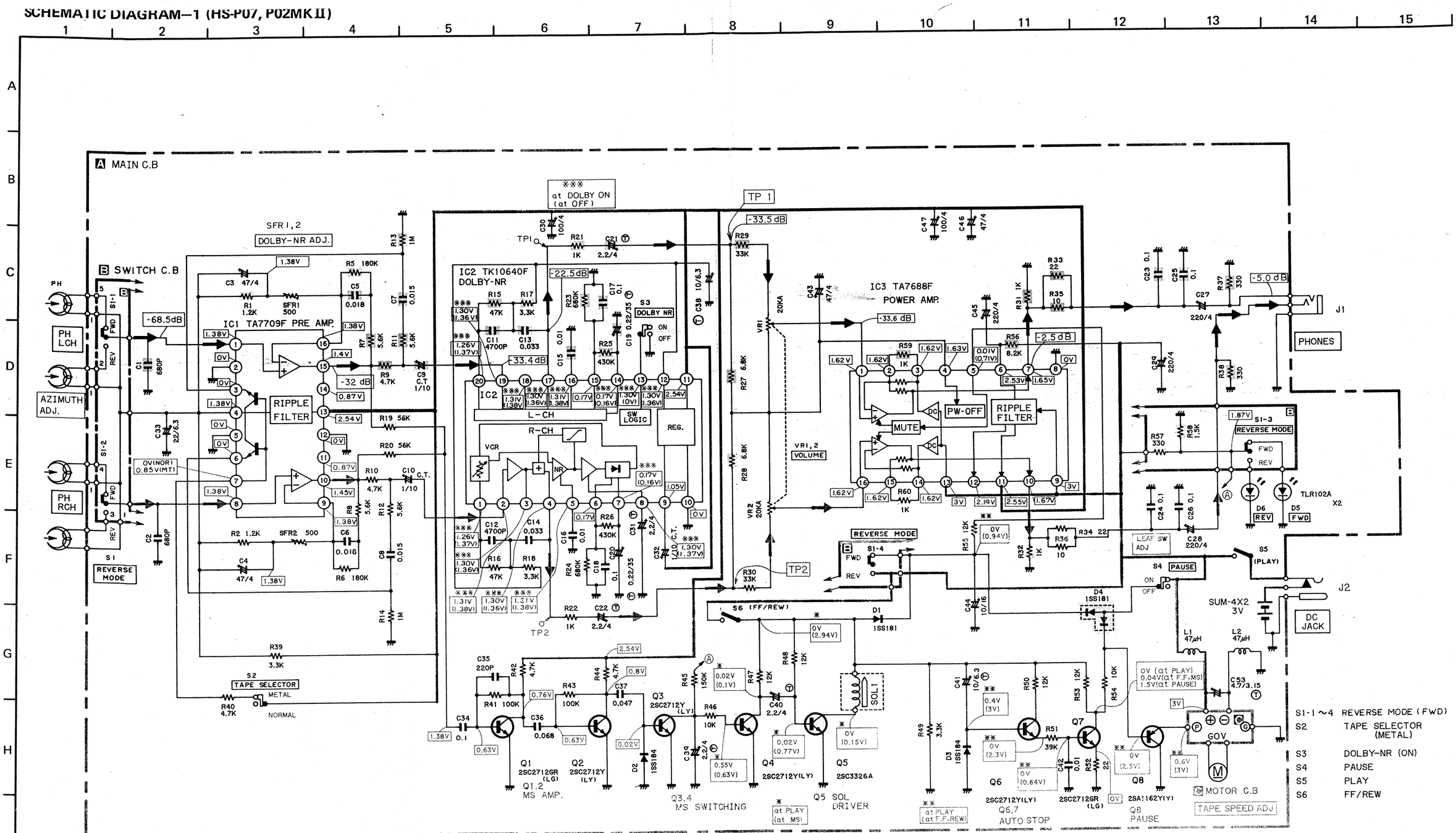
Power value	Type	Dimensions (mm)			
		Form	L	W	t
1/10W	A : 118		2	1.25	0.45
1/8W	A : 129		3.2	1.6	0.5~0.7

Example of chip resistor

560Ω 88-118-561

10KΩ 88-129-103

SCHEMATIC DIAGRAM—1 (HS-P07, P02MKII)



Symbol No.	Part No.	Description	Remark
C19,20	87-015-923	0.22μF 35V CHIP TANTALUM	
C21,22,31, 38,40	87-015-934	2.2μF 4V CHIP TANTALUM	
C27,28,30 45,48,49	87-010-082	220μF 4V ELECTROLYTIC	
C29	87-010-076	22μF 6.3V ELECTROLYTIC	
C33,41	87-015-986	10μF 6.3V TANTALUM	
C35	87-015-768	220pF CHIP CAPACITOR	
C36	87-010-195	0.068μF CHIP CAPACITOR	
C37	87-010-194	0.047μF CHIP CAPACITOR	
C44	87-010-075	10μF 16V ELECTROLYTIC	
C47	87-010-115	100μF 4V TANTALUM	
C50	87-015-440	4.7μF 3.15V TANTALUM	
C52	87-010-158	22pF CHIP CAPACITOR	
C53,54	87-010-169	180pF CHIP CAPACITOR	
<SWITCH CIRCUIT BOARD SECTION>			
PCB-C	*	SWITCH CIRCUIT BOARD	
S1	87-031-829	SLIDE SWITCH(REVERSE MODE)	
<MOTOR CIRCUIT BOARD SECTION>			
M	82-679-604	MOTOR(W/PCB-D)	
<RELAY CIRCUIT BOARD SECTION>			
PCB-E	82-682-606	PCB CONNECTOR B	
<MISCELLANEOUS>			
PH	82-679-605	PB HEAD	
SOL1	87-045-226	SOLENOID	

Note; Combination Circuit Board

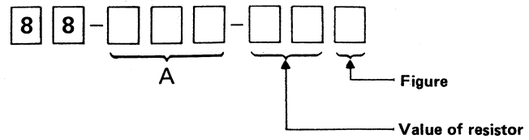
The parts on the electrical parts list which are indicated by an asterisk (*) are supplied as one single combined circuit board. Therefore, they will not be supplied separately. If this becomes necessary, please order the entire circuit board.

Combination circuit board 82-682-604

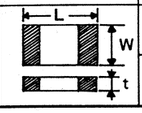
PCB-B 82-682-602

PCB-C 82-682-603

Chip resistor parts cord



Chip resistor

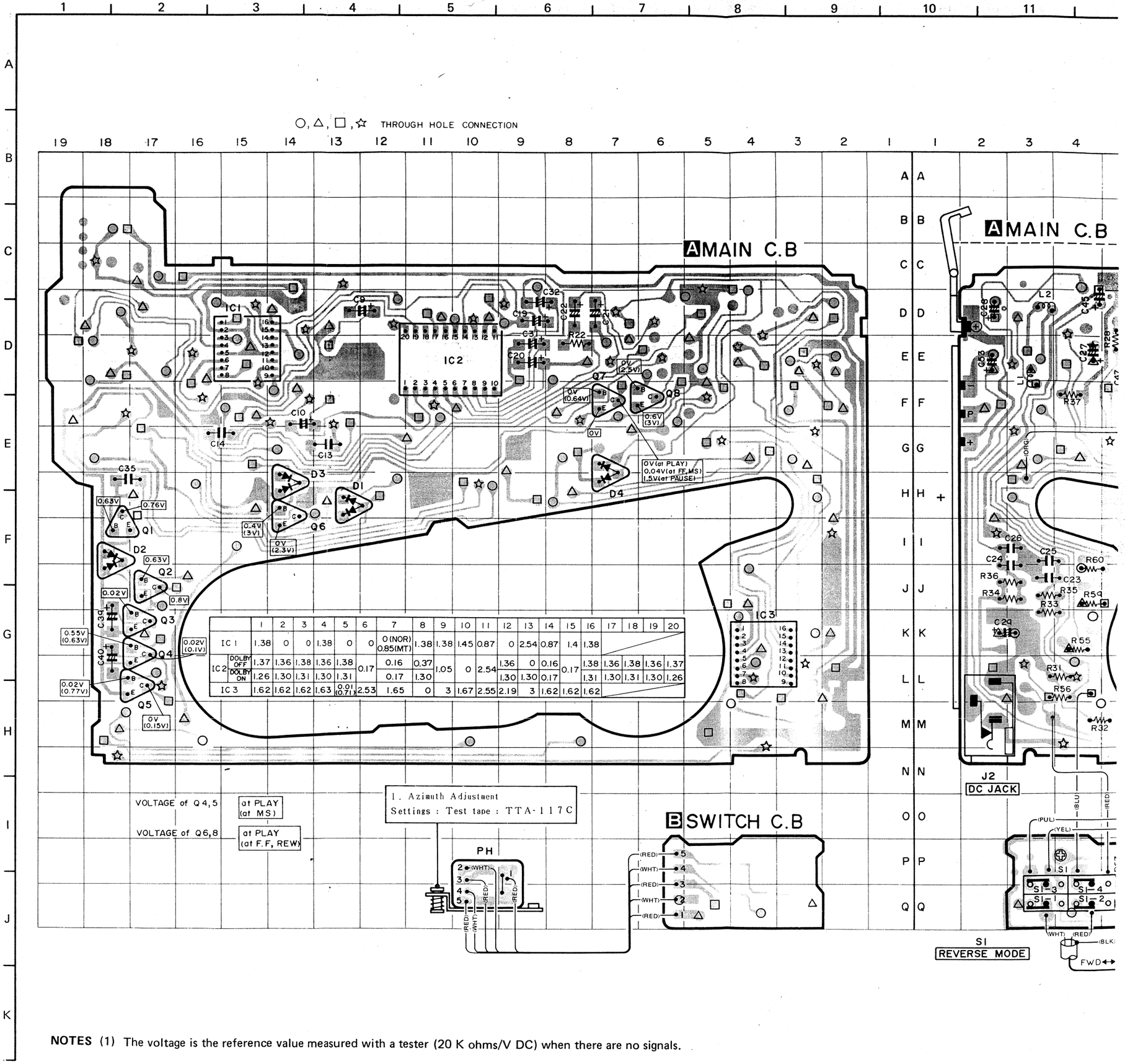
Power value	Type	Dimensions (mm)			
		Form	L	W	t
1/10W	A : 118		2	1.25	0.45
1/8W	A : 129		3.2	1.6	0.5~0.7

Example of chip resistor

560Ω 88-118-561

10KΩ 88-129-103

WIRING—1 (HS-P07, P02MK II)



		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
IC 1		1.38	0	0	1.38	0	0	0 (NOR) 0.85(MT)	1.38	1.38	1.45	0.87	0	2.54	0.87	1.4	1.38				
IC2	DOLBY OFF	1.37	1.36	1.38	1.36	1.38	0.17	0.16	0.37	1.05	0	2.54	1.36	0	0.16	0.17	1.38	1.36	1.38	1.36	1.37
	DOLBY ON	1.26	1.30	1.31	1.30	1.31		0.17	1.30				1.30	1.30	0.17		1.31	1.30	1.31	1.30	1.26
IC 3		1.62	1.62	1.62	1.63	0.01 (0.7)	2.53	1.65	0	3	1.67	2.55	2.19	3	1.62	1.62	1.62				

VOLTAGE of Q4,5 at PLAY (at MS)

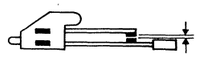
VOLTAGE of Q6,8 at PLAY (at F.F, REW)

1. Azimuth Adjustment
Settings : Test tape : TTA-117C

NOTES (1) The voltage is the reference value measured with a tester (20 K ohms/V DC) when there are no signals.

3. DOLBY N. R Adjustment
Settings : • Test tape : TTA-161
• Adjustment locations : SFR1(Lch), SFR2(Rch)
• Test point : TP1, 2
Method : Adjust SFR1, (2) so that the voltage at test point. TP1-ground (TP2-ground) is 100mV

4. Leaf switch Adjustment
Method : Adjust the leaf switch for the clearance of 0.5~1.0mm



AMAIN C.B

SUM-4x2 3V

DIRECTION
REV.
FWD.
VR1,2 VOLUME
J1 PHONES

TP2 DOLBY-NR Adj. (R-ch)

TP1 DOLBY-NR Adj. (L-ch)

S5(PLAY)

S6 (F.F/REW)

SOL.1

J2 DC JACK

OFF ↔ ON
S3 DOLBY-NR

NORMAL ↔ METAL
S2 TAPE SELECTOR

OFF ↔ ON
S4 PAUSE

BSWITCH C.B

S1 REVERSE MODE
FWD↔REV

CMOTOR C.B
M (MOTOR)
SFR

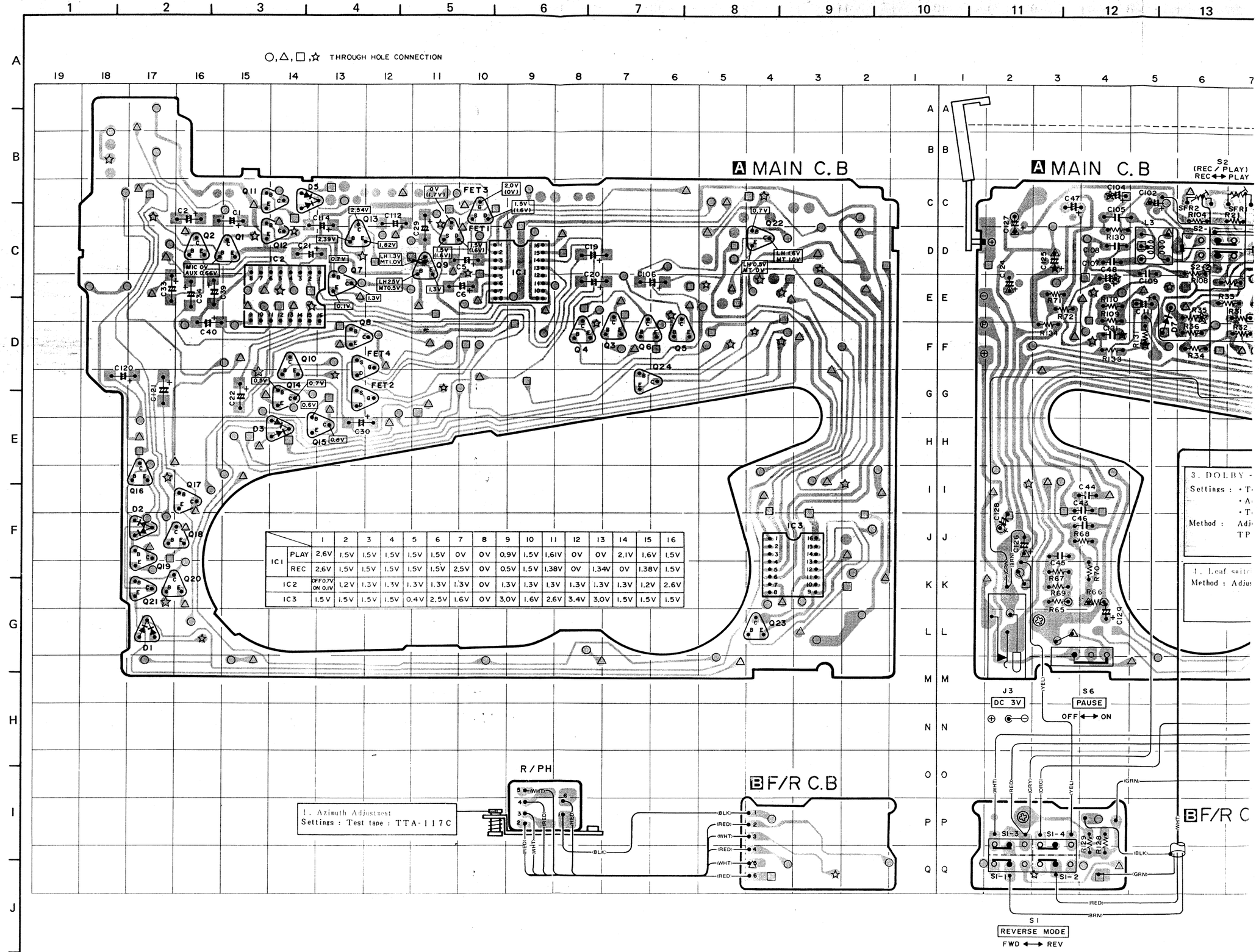
0V (2.5V)
0.6V (3V)
0V (at PLAY)
0.04V (at FF, MS)
1.5V (at PAUSE)

	16	17	18	19	20
38					
38	1.36	1.38	1.36	1.37	
31	1.30	1.31	1.30	1.26	
62					

2. Tape speed Adjustment
Settings : Test tape : TTA-111

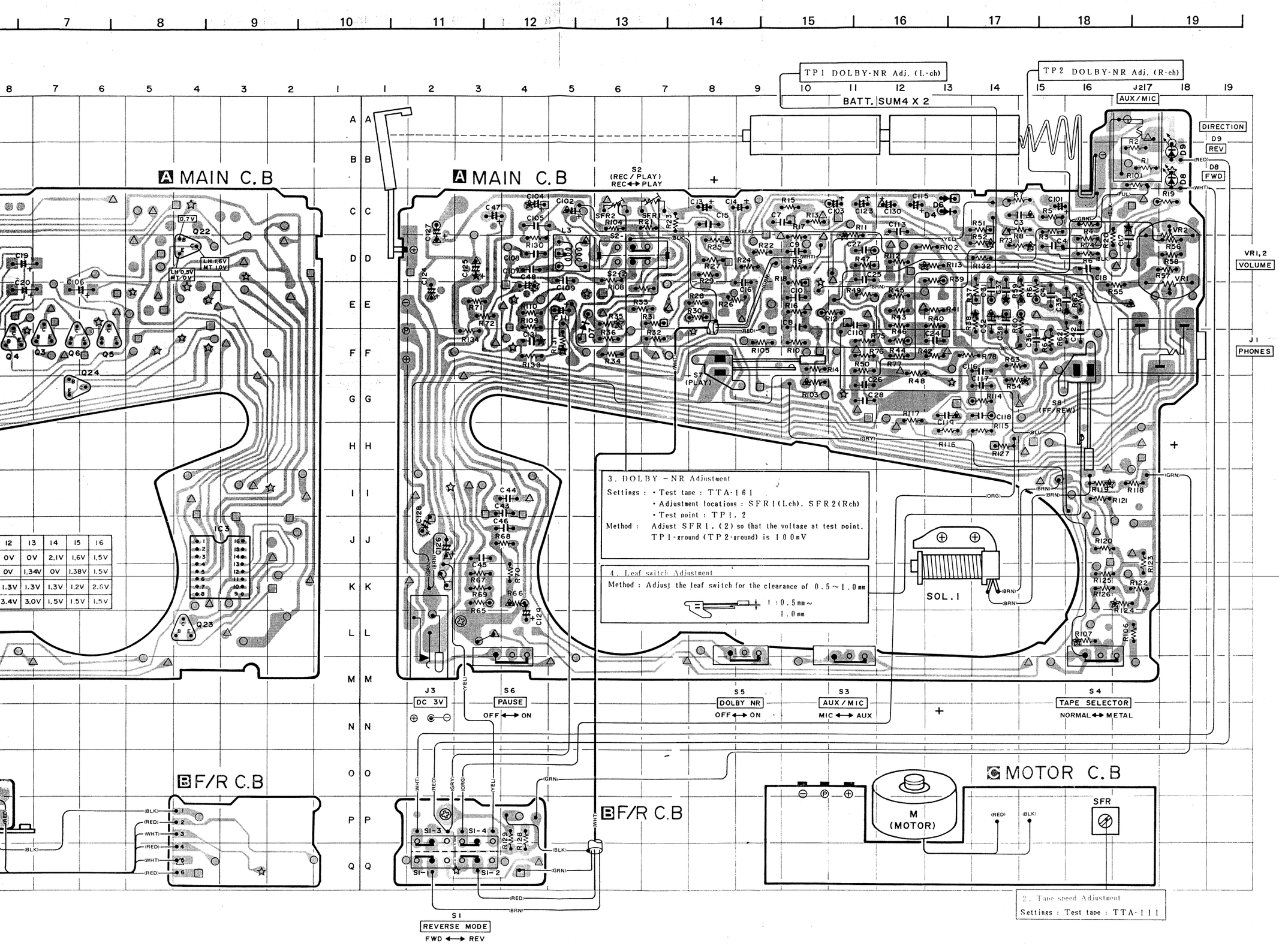
here are no signals.

WIRING—2 (HS-F07)

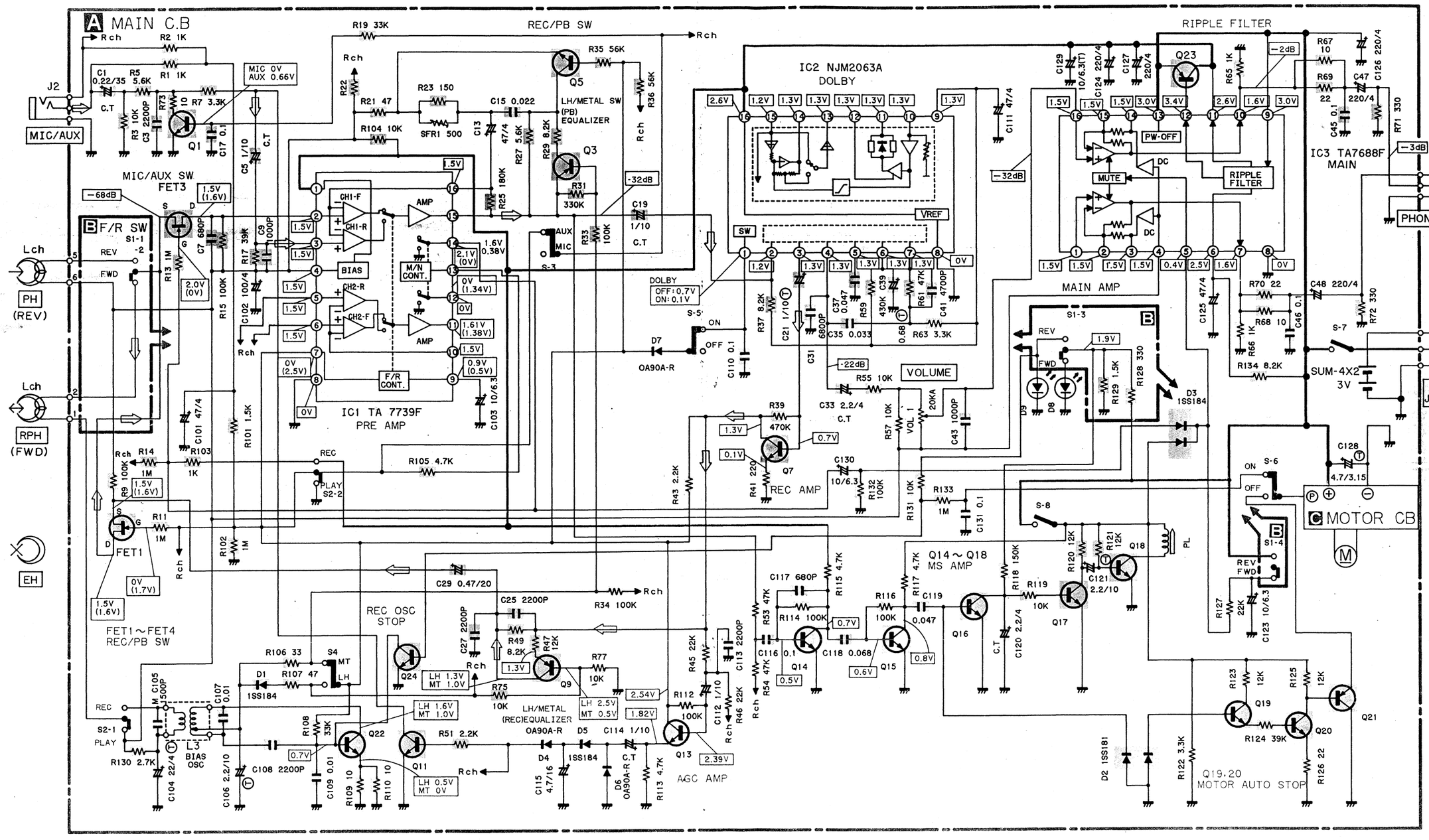

○,△,□,☆ THROUGH HOLE CONNECTION
A MAIN C.B
A MAIN C.B
S2 (REC / PLAY) REC ↔ PLAY
IC1
IC2
IC3
FET1
FET2
FET3
FET4
Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12 Q13 Q14 Q15 Q16 Q17 Q18 Q19 Q20 Q21 Q22 Q23 Q24
D1 D2 D3 D5
C1 C2 C5 C6 C19 C20 C21 C22 C29 C30 C33 C34 C39 C40 C47 C48 C120 C121 C122
L3
R130 R71 R72 R134 R133 R34 R35 R31 R32 R36 R68 R67 R69 R65 R66 R70 R129 R128
SFR1 R21 SFR2 R104
C104 C102 C105 C106 C107 C108 C109 C110 C111 C31 C44 C42 C46 C45 C43 C128 C126 C129
3. DOLBY -
Settings : • T • A • T
Method : Adj TP
4. Leaf sait
Method : Adjus
J3
DC 3V
S6
PAUSE
OFF ↔ ON
S1
REVERSE MODE
FWD ↔ REV
SI-1 SI-2 SI-3 SI-4
R / PH
BF/R C.B
BF/R C
1. Azimuth Adjustment
Settings : Test tape : TTA-117C
(BLK) (RED) (WHT) (GRN) (YEL) (ORG) (GRY) (BRN)

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
IC1	PLAY	2.6V	1.5V	1.5V	1.5V	1.5V	1.5V	0V	0V	0.9V	1.5V	1.61V	0V	0V	2.1V	1.6V	1.5V
	REC	2.6V	1.5V	1.5V	1.5V	1.5V	1.5V	2.5V	0V	0.5V	1.5V	1.38V	0V	1.34V	0V	1.38V	1.5V
IC2		OFF 0.7V ON 0.1V	1.2V	1.3V	1.3V	1.3V	1.3V	1.3V	0V	1.3V	1.3V	1.3V	1.3V	1.3V	1.3V	1.2V	2.6V
IC3		1.5V	1.5V	1.5V	1.5V	0.4V	2.5V	1.6V	0V	3.0V	1.6V	2.6V	3.4V	3.0V	1.5V	1.5V	1.5V

NOTES (1) The voltage is the reference value measured with a tester (20 K ohms/V DC) when there are no signals.
An asterisk (*) indicates that the value was measured with a vacuum-tube voltmeter during recording.

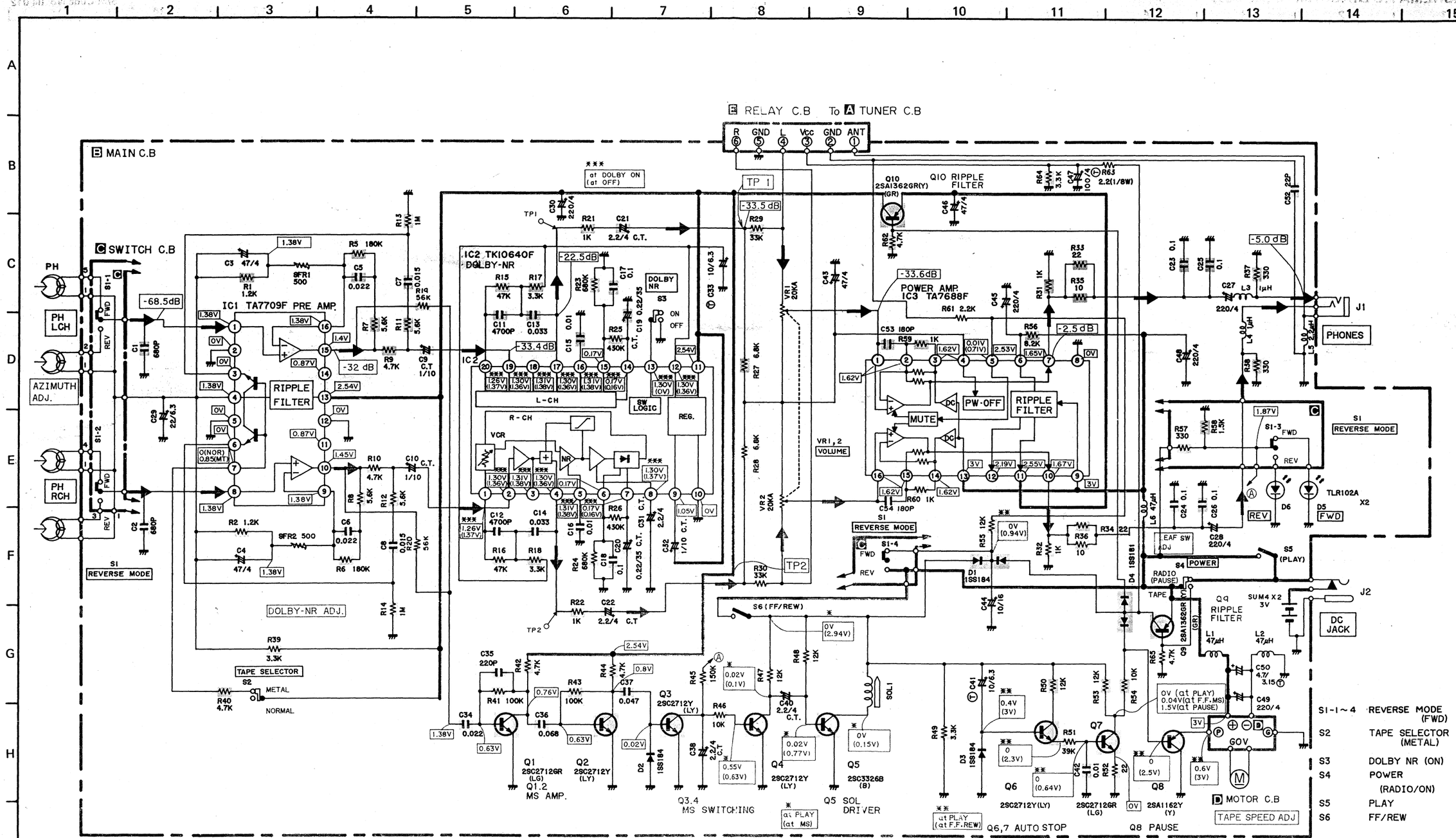


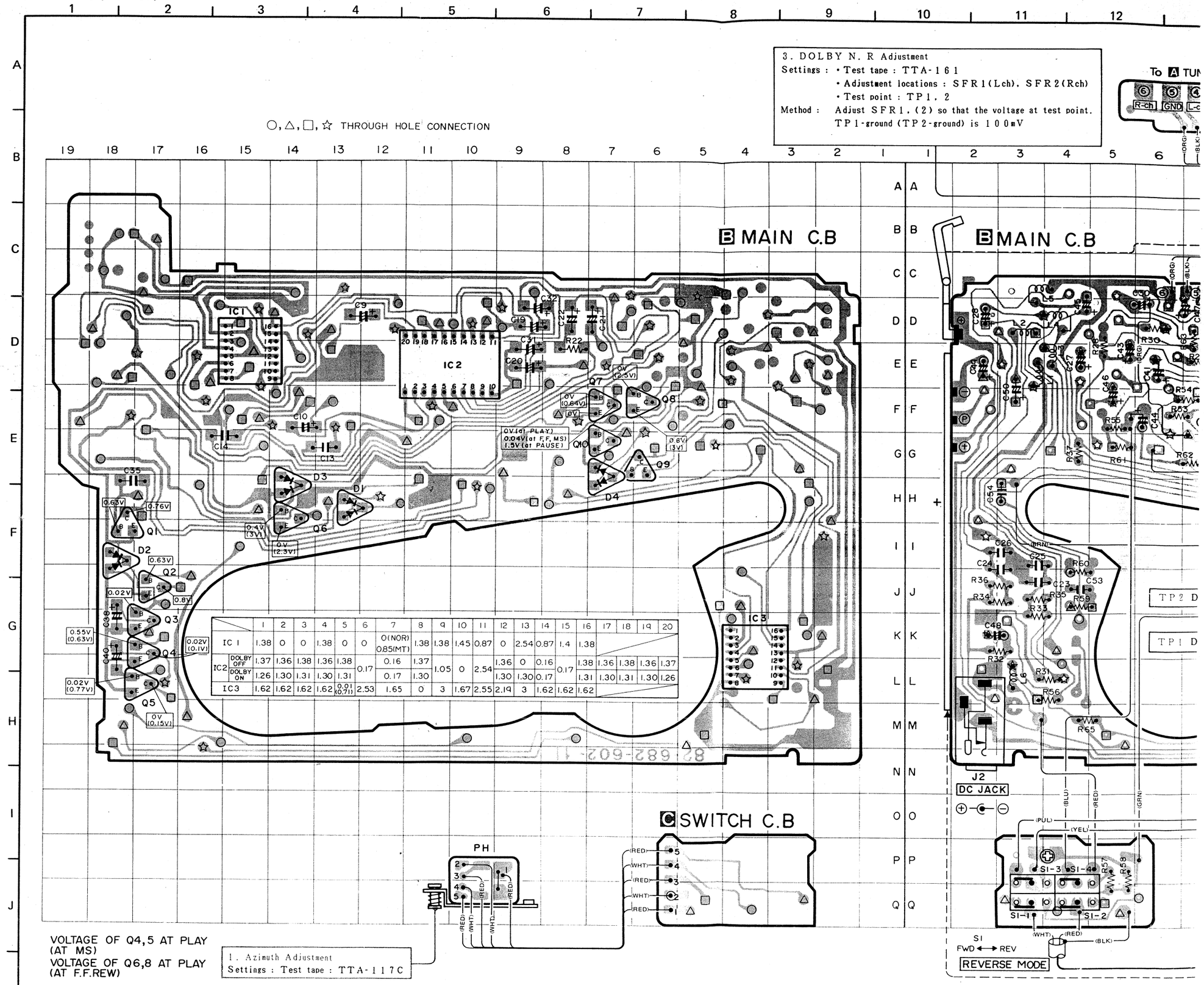
there are no signals.
er during recording.



S1-1 ~ 4	REVERSE MODE (FWD)	S5	DOLBY SW (ON)	Q1,2,5~8,11,12,18--2SC3326B	FET 1,2,3,4----2SK209Y
S2-1 ~ 2	REC/PLAY SW (PB)	S6	PAUSE SW (ON)	Q3,4,9,10,21,23----2SA812M6	Q22----------2SD1328T
S3	MIC/AUX SW (AUX)	S7	PLAY SW	Q13~17,19,20,24----2SC1623L6	
S4	TAPE SEL SW (MT)	S8	FF/REW SW		

SCHEMATIC DIAGRAM–3 (HS-U07)





		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
IC 1		1.38	0	0	1.38	0	0	0(NOR) 0.85(MT)	1.38	1.38	1.45	0.87	0	2.54	0.87	1.4	1.38				
IC2	DOLBY OFF	1.37	1.36	1.38	1.36	1.38	0.17	0.16	1.37	1.05	0	2.54	1.36	0	0.16	0.17	1.38	1.36	1.38	1.36	1.37
	DOLBY ON	1.26	1.30	1.31	1.30	1.31		0.17	1.30				1.30	1.30	0.17		1.31	1.30	1.31	1.30	1.26
IC3		1.62	1.62	1.62	1.62	0.01 (0.71)	2.53	1.65	0	3	1.67	2.55	2.19	3	1.62	1.62	1.62				

VOLTAGE OF Q4,5 AT PLAY (AT MS)
VOLTAGE OF Q6,8 AT PLAY (AT F.F.REW)

1. Azimuth Adjustment
Settings : Test tape : TTA-117C

NOTES (1) The voltage is the reference value measured with a tester (20 K ohms/V DC) when there are no signals.

3. DOLBY N. R Adjustment
Settings : • Test tape : TTA-161
• Adjustment locations : SFR1(Lch), SFR2(Rch)
• Test point : TP1, 2
Method : Adjust SFR1, (2) so that the voltage at test point. TP1-ground (TP2-ground) is 100mV

To A TUNER C.B
⑥ R-ch ⑤ GND ④ L-ch ③ +B ② GND ① ANT
(ORG) (BLK) (WHT) (RED) (GRY) (BRN)

E RELAY C.B

4. Leaf switch Adjustment
Method : Adjust the leaf switch for the clearance of 0.5～1.0mm
t : 0.5mm ～ 1.0mm

B MAIN C.B

B MAIN C.B

SUM-4x2 3V

DIRECTION
D6 REV. (YEL)
D5 FWD. (PUL)

VR1,2 VOLUME

J1 PHONES

S5(PLAY)

S6 (F.F/REW)

TP2 DOLBY-NR Adj. (R-ch)

TP1 DOLBY-NR Adj. (L-ch)

SOL.1

J2 DC JACK

S3 DOLBY-NR OFF ↔ ON

S2 TAPE SELECTOR NORMAL ↔ METAL

S4 POWER TAPE ↔ RADIO (PAUSE)

C SWITCH C.B

C SWITCH C.B

S1 FWD ↔ REV
REVERSE MODE

M MOTOR

D MOTOR C.B

SFR

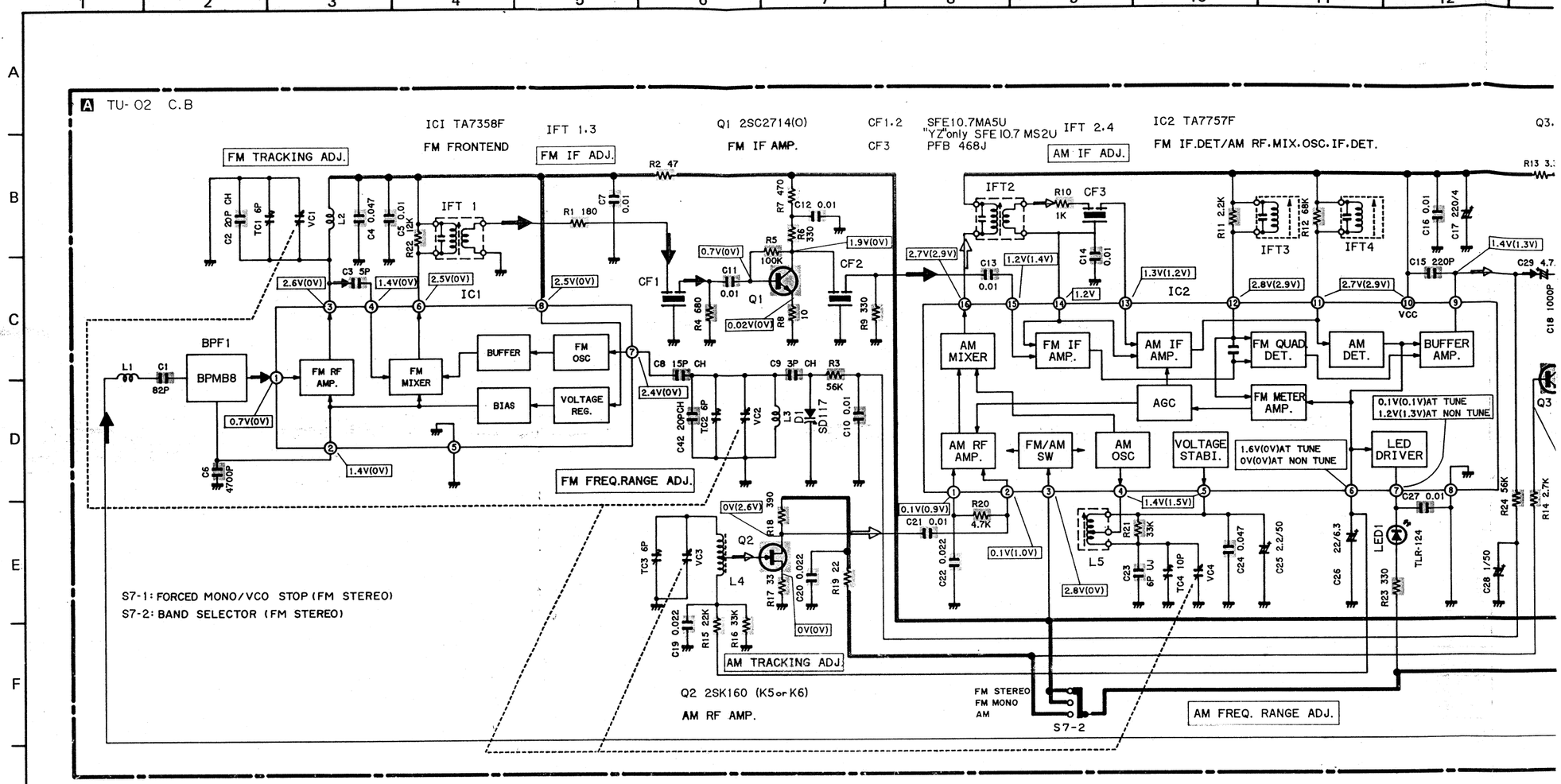
2. Tape speed Adjustment
Settings : Test tape : TTA-111

	16	17	18	19	20
	1.38				
7	1.38	1.36	1.38	1.36	1.37
	1.31	1.30	1.31	1.30	1.26
2	1.62				

82-682-602

re are no signals.

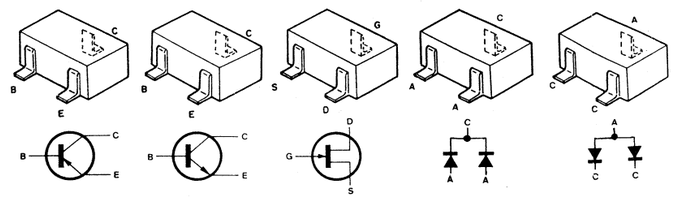
SCHEMATIC DIAGRAM—4 (HS-U07)



NOTES:

1) ■ B (+) power supply
2) ➡ Signal path
   ⇨ Rec path, AM signal path
3) The voltage is the reference value measured with a tester (20 k-ohms/V DC) when there are no signals.
   But ( ) is with AM reception or recording.
   An asterisk (*) indicates that the value was measured with a vacuum-tube voltmeter during recording.
4) Resistors with no designation have a rated power of 1/16W and a tolerance of ±5%.
5) Capacitors with no designation have a dielectric strength of less than 50WV.
6) The only capacitor tolerance indicated are ±5% (J) and ±10% (K).
7) Ceramic capacitor symbols:
   —||— For temperature compensation (SL)
   —||— High dielectric constant system (YY)
   —||— High dielectric constant system (YW, YP, YZ)
   —||— Semiconductor ceramic
   —||— For temperature compensation (SH)
8) Explanation of symbols
   Ⓐ Aluminum solid capacitor
   Ⓣ Tantalum capacitor
   Chip parts
   Chip capacitor
   Chip tantalum capacitor
   Chip resistor
   Chip diode
   Chip transistor

● This schematic diagram is subject to change without notice in the interests of improved performance.



2SA812
2SA1162
2SA1362

2SC1623
2SC2712
2SC2714
2SC3326
2SD1328

2SK160
2SK209

1SS184

1SS181

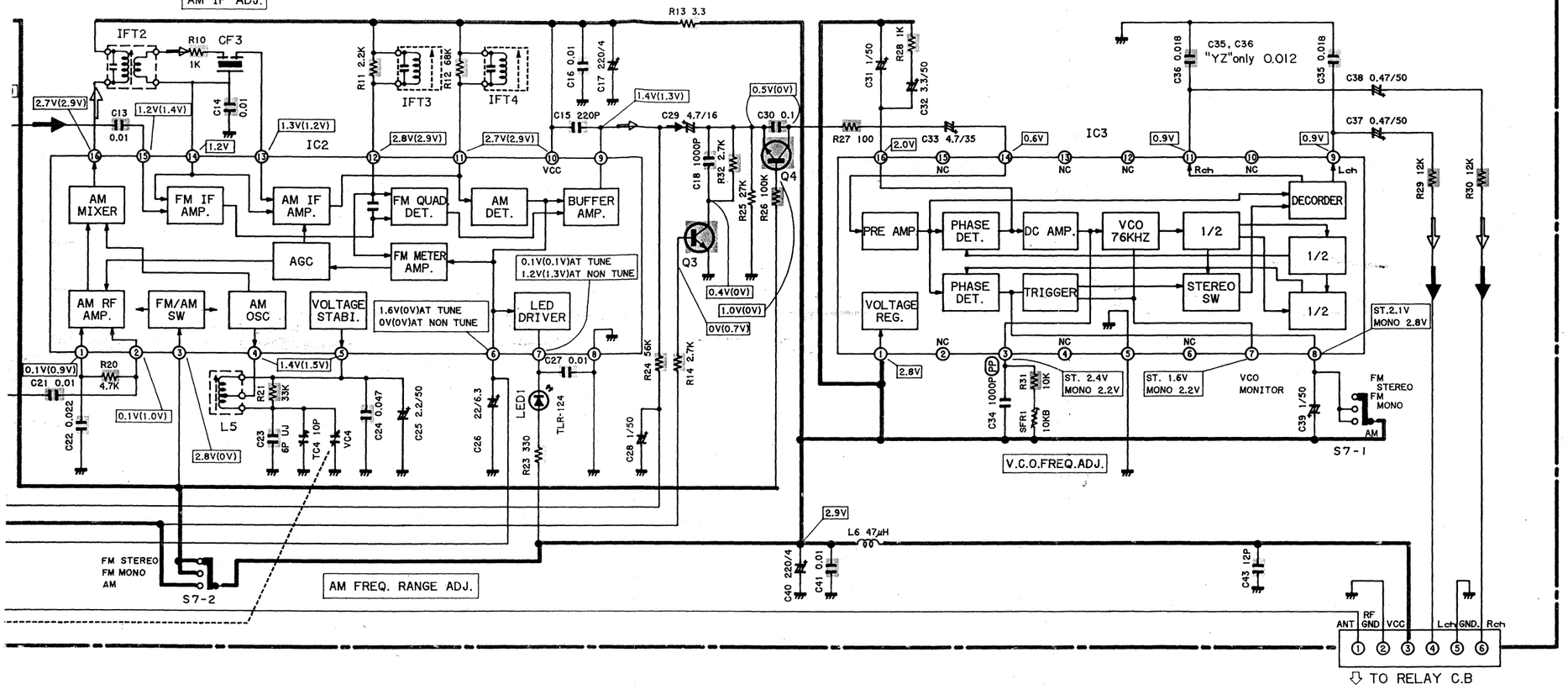
.2 SFE10.7MA5U
"YZ"only SFE10.7MS2U IFT 2.4
PFB 468J

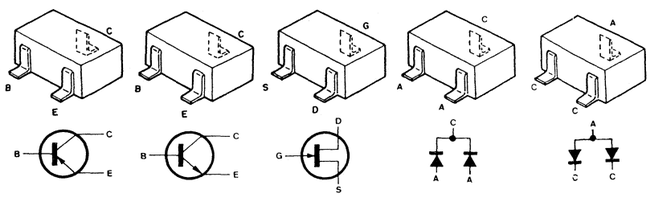
AM IF ADJ.

IC2 TA7757F
FM IF.DET/AM RF.MIX.OSC.IF.DET.

Q3.4 2SC2712(GR)
FM/AM SW

IC3 TA7342F
FM STEREO MPX DEMODULATOR

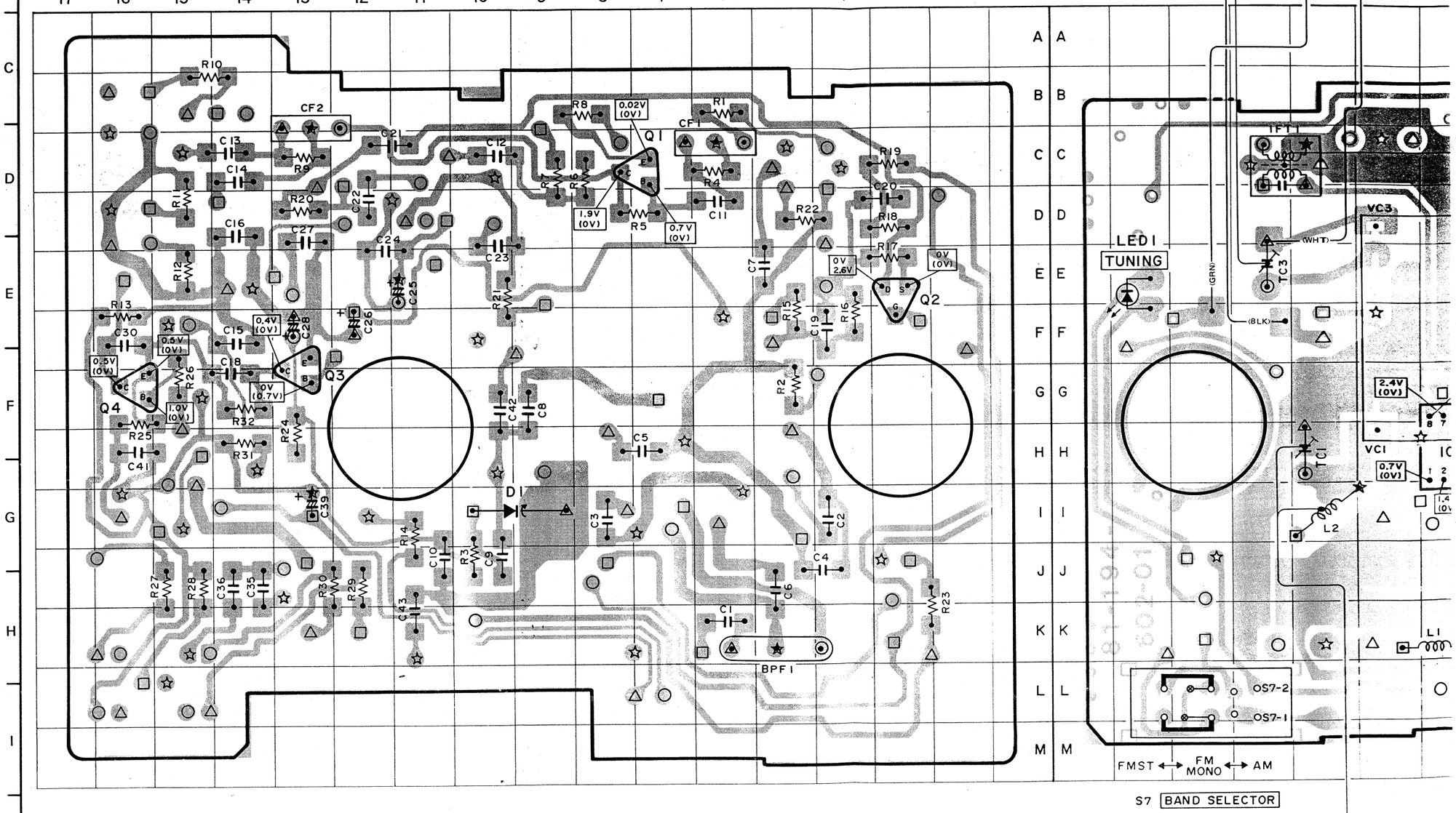




L4 AM BAR ANTENNA

4. AM TRACKING ADJ.
L4 . . . . . 600kHz
TC3 . . . . . 1,440kHz

A TU-02 C.B



○, △, □, ☆ : Through hole connection

6. FM TRACKING ADJ.
L2 . . . . . .
TC1 1

NOTES (1) The voltage is the reference value measured with a tester (20 K ohms/V DC) when there are no signals.
But ( ) is with AM reception.

L4 AM BAR ANTENNA

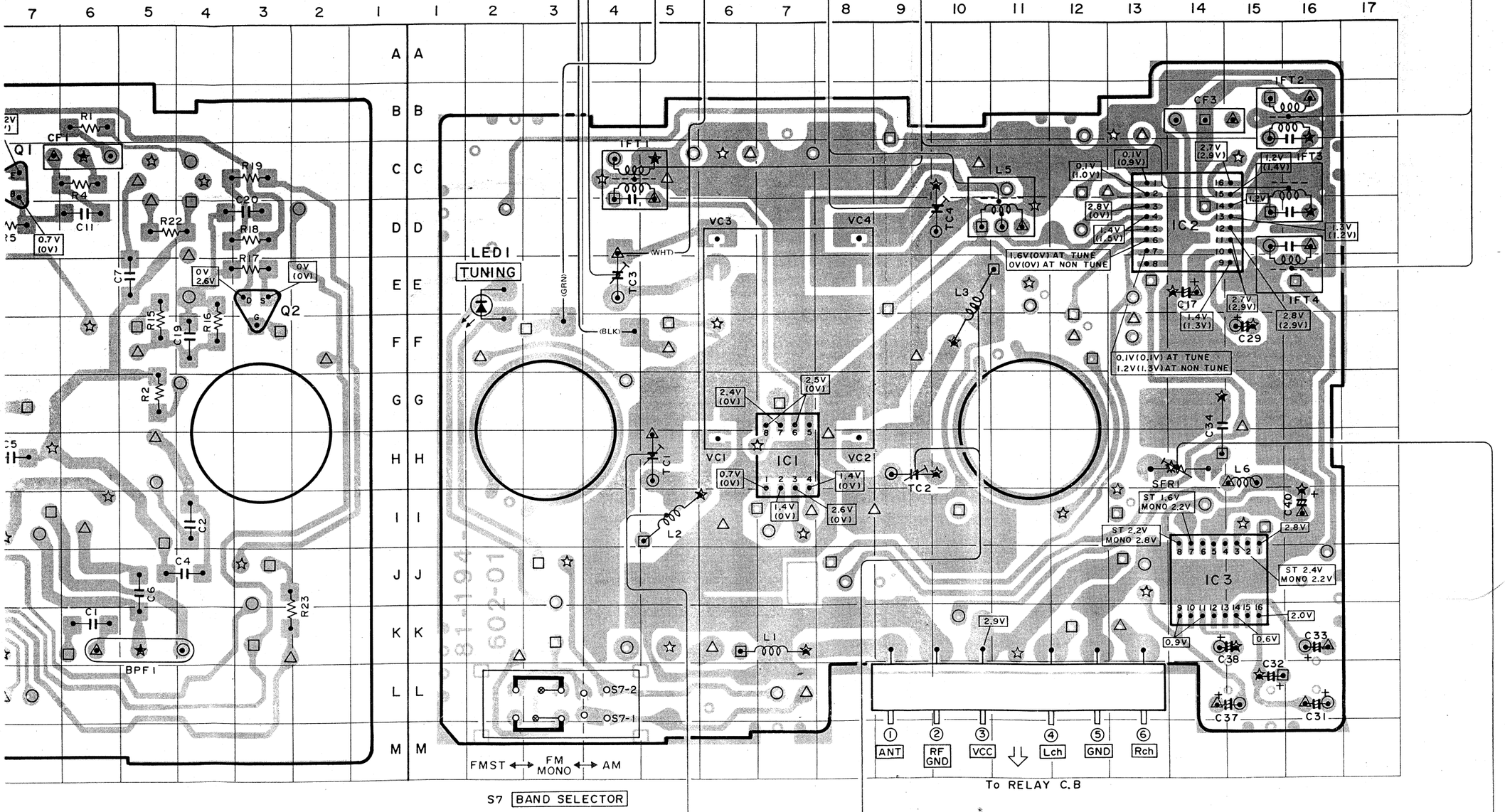
4. AM TRACKING ADJ.
L4 . . . . . 600kHz
TC3 . . . . . 1,440kHz

3. AM FREQ. RANGE ADJ.
L5 . . . . . 517kHz
TC4 . . . . . 1,650kHz

1. AM IF ADJ.
IFT2, 4 . . . . . 468kHz

2. FM IF ADJ.
IFT1, 3 . . . . . 10.7MHz

A TU-02 C.B



○, △, □, ☆ : Through hole connection

6. FM TRACKING ADJ.
L2 . . . . . 88MHz
TC1 . . . . . 108MHz

5. FM FREQ. RANGE ADJ.
L3 . . . . . 87.4MHz
TC2 . . . . . 108.3MHz

7. V. C. O FREQ. ADJ.
SFR1 . . . . . 76kHz±40Hz

when there are no signals.